VANLOVES

1981 APPLE II/III SOFTWARE DIRECTORY



Vital Information encourages all comments on Apple uses and actively seeks short essays and stories of Apple uses. Feel free to submit your articles to Vital Information for publishing in our future books. We encourage new software listings; please forward to Vital Information.

Vital Information accepts no responsibility for quality of these programs and assumes no liability for use of information contained in these pages.

We hope this directory finds a permanent place on your bookshelf right next to your Apple manual. To say the least, we here at Vital Information are proud to have compiled such a volume of software available for the Apple II/III computers. We have watched Apple grow to become the most respected name in micro computers.

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Thank you,

Gerald "Van" Diver

Rolland T. Love

Gerald Van Diver

Rolland Love

P.S. We Would like to say "thank you" to a few people for their efforts, help and support.
A warm thanks to Terri Van Diver, Bryce Van Diver, Marlyn Love, Jeanie Love, Janet Love, Jim Morey, Earletta Morey, Dave Ossman, The Dodge Band, Father Schmidt, Cody, Joe Stuckel, Chris Likens, Lynn Busby, Kyle, George, Jeff Koppelson, Dennis Jolly, the dynamic team from Barry Graphics, Bud Wiser, Mike Harland, Bob Pletchica, Wes Scofield, Jeff Scofield, Greg Kirkpatrick, Steve Bordnak, Clark Horvath and Marty Greenburg.

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GUIDE TO USING THIS BOOK

Software is divided into main subject categories. Business, Word Processing, etc. Refer to pages listed for descriptions of programs pertaining to that heading. In front of each subject section is located an index of *that* section. In some categories there are two sections, check both sections for listing. ex. Educational programs will have the E- with a number, E-19; which simply tells you Educational section page 19; or CPM section would have all of its page numbers, CPM-, then the page numbers, CPM-1. Categories with 2 sections have the number 2 appear before the subject code, ex. 2CPM-10 (second section of CPM category - page 10).

Programs are listed by **Title:** Be sure to look carefully through each section. Some titles may be misleading or don't describe what the program actually does.

Published by: Publisher or manufacturer or distributor or dealer.

Description: A basic description of the program. Some titles are very obvious, while a good description is needed for others. We encourage all publishers to send software to us for a description. Memory requirements - see dealer.

Price: Prices may change without notice. No price appears in some cases, especially Peripherals. This is because they might change. We recommend your local dealer for purchasing these programs.

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Agriculture ..... AG
Apple III ..... APIII
Books ..... BK
Business Accounting ..... B
Cases ..... CS
Communications C
CP/M—Z80 Softcard Software (Business, Programming Aides, etc.) ..... CPM
Data Base Programs ..... DB
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Supplies ..... SUP
Strategy Games ..... SG
Time Sharing ..... TS
Word Processing/Text Editors ..... WP
6809 Card and Software 6809
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Vendor List VL

Hi,

Van asked me if I would like to write a few words about the Apple Computer System for his reference book. I agreed readily. Now that I have actually seen some of the proofed sections of his book, I am very glad I accepted his offer. This book is the most accurate and comprehensive review of Apple Computer compatible programs and accessories I have seen. The format is clear and concise while the information is timely and accurate. It is a 'must have' book for every Apple owner and everyone considering the purchase of an Apple Computer System.

The Apple Computer System has been referred to in many ways. I have heard the system called a Mind Appliance, a Productivity Tool, a Fourth Wave Machine, and a Volkswagen Computer. In fact the Apple Computer System is all the above. The uses and applications of the Apple Computer System are as unlimited as the imagination of the human spirit. I personally have witnessed the use of Apple Computers in laboratories for research, in classrooms for teaching, in offices for accounting and word processing and yes, even in the home for preparing personal budgets, bowling records for a league and writing irate letters to our elected officials. In fact, this present exercise in the printed word was prepared on my Apple.

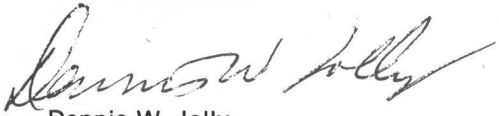
The most often asked question about the Apple Computer System is — Can I do (fill in some task) with my Apple? This book goes a long way toward answering this question. Just pick a subject area, look it up in the index and you will find a number of sources for both the software and the accessories to get the job done.

Each program and accessory you look up is described with some applications listed. Sources are given so you can acquire the package or get more information if you need it.

I would strongly recommend that you talk to your *local* Apple Dealer first. Perhaps the dealer has already sold and used the software you are interested in from this book. Your Local Apple Dealer is an Expert. If he has not used and/or previously sold the package you need, then let him contact the source for more information and act as your agent. Many software houses and accessory manufacturers are much more willing to spend time with an Apple Computer Retailer because of the prospect for multi-unit sales.

I'm sure you will enjoy your Apple computer System. I am also sure this book will supply many answers and sources of programs and accessories you will use with your Apple Computer System.

Happy computing

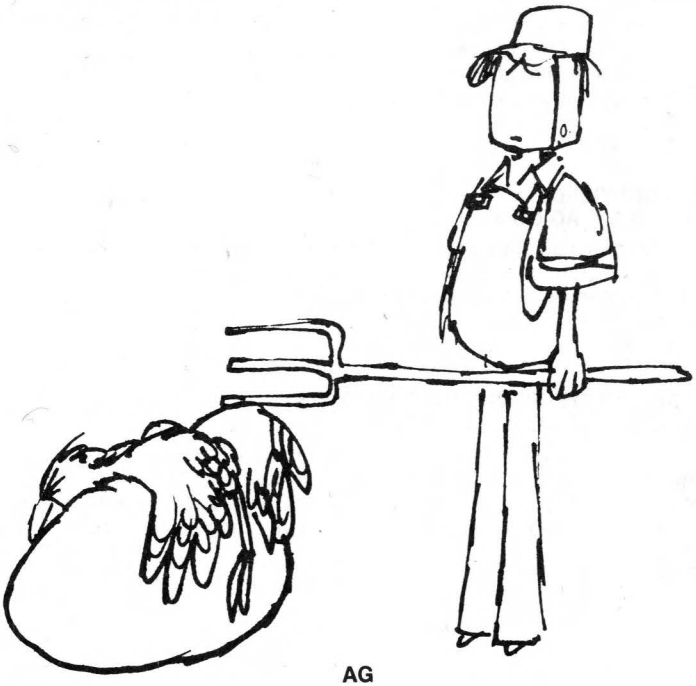


Dennis W. Jolly
Mid-Central Sales Representative
Apple Computer, Inc.

AGRICULTUAL/FARMS

Most of the Agricultural Programs contain helpful information for the small farmer as well as the large scale co-op. You may also refer to the business section for accounting and general business programs.

Cattle Feeding Economics AG-1
Corn Vs. an Alternate Crop AG-1
Corn Harvest Losses AG-1
Cow-Calf Profitability AG-1
Crop Yields AG-1
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Liquid Manure and Fertilizer AG-3
Net Energy for Feedlot Cattle AG-3
Protein Balancing for Feedlot Cattle AG-3
Selling Wet Corn Vs. Dry AG-3
Sheep Production Economics AG-3
Soil Erosion AG-4
Soybean Harvest Losses AG-4
Swine Ration Analysis AG-4
Swine Rotation Formulation AG-4



TITLE: CATTLE FEEDING ECONOMICS
PUBLISHED BY: AG-COM

Using the production cost of the cattle feeder, this program calculates the following: 1) the price that can be paid for feeder calves and earn desired return; 2) the necessary selling price to cover variable and total costs; and 3) a number of other costs such as: feed cost, non-feed costs, interest cost, etc.
48K APPLE
PRICE: $49.95

TITLE: CORN VS. AN ALTERNATE CROP
PUBLISHED BY: AG-COM

This program will compare the economics of raising soybeans, or any other grain crop to the economics of raising corn. It looks at the variable cost of producing an alternate crop and calculates the necessary price to make that crop profitable. This program assumes that your fixed costs for either crop are the same.
48K APPLE
PRICE: $49.95

TITLE: CORN HARVEST LOSSES
PUBLISHED BY: AG-COM

This program will calculate corn harvest losses and analyze them regarding the causes of those losses. This program goes hand-in-hand with Pm-574, "Profitable Corn Harvesting," available from the Cooperative Extension Service of Iowa State University.
48K APPLE
PRICE: $49.95

TITLE: COW-CALF PROFITABILITY
PUBLISHED BY: AG-COM

This program looks at the profitability of the beef cow-calf enterprise for one production cycle. The output includes your break-even cost per calf, return to capital, labor and management using your estimated selling price, and also gives your cull cow adjustment factor per calf sold.
48K APPLE
PRICE: $49.95

TITLE: CROP YIELDS
PUBLISHED BY: AG-COM

This program will calculate the yield of non-forage crops based upon the number of pounds of grain harvested in a test area. The moisture percent of the harvested grain must also be known.
48K APPLE
PRICE: $49.95

TITLE: DAY ADJUSTED WEANING WEIGHTS
PUBLISHED BY: AG-COM

The purpose of this program is to adjust weaning weights of calves so the performance of calves can help determine superior genetics in a beef cow herd. This program enables the use of estimated or known birth weights. A partial list of standard birth weight used by the respective breed organizations is given.
48K APPLE
PRICE: $49.95

TITLE: ECONOMICS OF CORN PRODUCTION
PUBLISHED BY: AG-COM

The purpose of this program is to help the user calculate his corn production costs. Output is broken down, into variable cost per bushel, fixed cost per bushel, and total cost per bushel. The program also gives return to labor, capital and management at estimated selling prices.
48K APPLE
PRICE: $49.95

TITLE: FARROW-TO-FINISH SWINE PRODUCTION
PUBLISHED BY: AG-COM

This program will analyze the farrow-to-finish operation. It will calculate the necessary price to cover fixed and variable costs, profits, return to management, returns to capital and labor, etc.
48K APPLE
PRICE: $49.95

TITLE: FEEDER PIG PRODUCTION
PUBLISHED BY: AG-COM

This program will analyze the production of feeder pigs for sale. It will calculate necessary prices to cover fixed and variable costs, profit and return to management, etc.
48K APPLE
PRICE: $49.95

TITLE: FERTILIZER FORMULATION
PUBLISHED BY: AG-COM

This program is designed for the farmer or fertilizer supplier. It will formulate the pounds and cost of a product that must be applied to achieve the pounds of actual nutrients desired. The six most common dry and liquid fertilizers are used.
48K APPLE
PRICE: $49.95

TITLE: FIELD POPULATION
PUBLISHED BY: AG-COM

This program will: 1) Calculate the plant population of a field based upon the number of plants in a test area. 2) Calculate the number of plants needed per ten feet of row to achieve a given population.
48K APPLE
PRICE: $49.95

TITLE: FIELD SIZE
PUBLISHED BY: AG-COM

This program will: 1) Calculate the size of rectangular fields based upon length and width measurements. 2) Calculate the width of field needed to obtain a field of a given number of acres.
48K APPLE
PRICE: $49.95

TITLE: FINISHING FEEDER PIGS
PUBLISHED BY: AG-COM

This program will analyze the purchasing and finishing of feeder pigs as to profitability, and prices needed to cover fixed costs, variable costs, profit and return to management, etc.

48K APPLE
PRICE: $49.95

TITLE: LEAST COST FERTILIZER APPLICATION
PUBLISHED BY: AG-COM

This program calculates the least cost method of purchasing and applying the three most commonly used forms of fertilizers, 1) dry fertilizer, 2) dry fertilizer and anhydrous, and 3) liquid fertilizer.
48K APPLE
PRICE: $49.95

TITLE: LIMING SOIL
PUBLISHED BY: AG-COM

The results of a soil test plus the analysis of ag lime material are used to determine the number of pounds of ag lime material needed on a given soil.
48K APPLE
PRICE: $49.95

TITLE: LIQUID MANURE AND FERTILIZER
PUBLISHED BY: AG-COM

This program uses soil test results and the results of analysis of liquid manure to determine the amount of liquid manure to be applied to the soil and the amount of commercial fertilizer still needed.
48K APPLE
PRICE: $49.95

TITLE: NET ENERGY FOR FEEDLOT CATTLE
PUBLISHED BY: AG-COM

The purpose of this program is to enable the user to evaluate the performance potential of the energy available in a given ration. It then estimates expected average daily gain in pounds per day based on the net energy system developed by Lofgreen and Associates.
48K APPLE
PRICE: $49.95

TITLE: PROTEIN BALANCING FOR FEEDLOT CATTLE
PUBLISHED BY: AG-COM

The purpose of this program is to evaluate the metabolizable protein available in a given ration and determines the amount of supplemental protein required for feedlot cattle.
48K APPLE
PRICE: $49.95

TITLE: SELLING WET CORN VS. DRY
PUBLISHED BY: AG-COM

This program compares: 1) selling wet corn at harvest, 2) selling dry corn at harvest, 3) drying corn and storing, as to potential profitability.
48K APPLE
PRICE: $49.95

TITLE: SHEEP PRODUCTION ECONOMICS
PUBLISHED BY: AG-COM

With the economic cycles of various livestock production enterprises, many producers are becoming interested in sheep production. After inputting your estimated costs, this program will calculate: the break-even selling price of

lambs; the return to labor, capital and management; and various other costs and returns.
48K APPLE
PRICE: $49.95

TITLE: SOIL EROSION
PUBLISHED BY AG-COM

This program uses the method of Harting and Laflen as described in the Journal of Soil and Water Conservation, March - April, 1979, and uses soil survey or farm conservation plan information to determine average annual soil losses.
48K APPLE
PRICE: $49.95

TITLE: SOYBEAN HARVEST LOSSES
PUBLISHED BY: AG-COM

Pm-573 "Profitable Soybean Harvesting," available from the Iowa State University Cooperative Extension Service, is the basis of this program which will determine the source and amount of soybean harvest losses.
48K APPLE
PRICE: $49.95

TITLE: SWINE RATION ANALYSIS
PUBLISHED BY: AG-COM

The purpose of this program is to compare the 1979 NRC swine nutrient requirements to the calculated analysis for a given swine ration. This program analyzes crude protein, calcium, and phosphorus. A standard swine complete protein supplement, which is used in this program summarizes common swine protein supplements sold by four Iowa-based feed companies
48K APPLE
PRICE: $49.95

TITLE: SWINE RATION FORMULATION
PUBLISHED BY: AG-COM

This program will not only compare a ration to the 1979 NRC swine nutrient requirements but will also balance a ration for crude protein and give you its calculated analysis for crude protein, lysine, calcium and phosphorus.
48K APPLE
PRICE: $49.95



APPLE III

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Apple Joystick ..... AP III-16
Apple III Universal Parallel Interface Card ..... AP III-17
Apple III OEM Prototyping Card ..... AP III-18



TITLE: THE APPLE III INFORMATION ANALYST
PUBLISHED BY: APPLE COMPUTER INC.

The Apple III Information Analyst is a highly integrated, personal computer system designed especially for professionals who work with facts and figures. It is built around the power and flexibility of the Apple III computer, with its big, 12-inch (diagonal) video monitor, 80 character, upper/lower case display, and high-resolution, color graphics capabilities. Other important features include a calculator-style, numeric keypad, built-in disk drive and clock/calendar, and integrated system interfaces for quick, inexpensive expansion when your needs require it.

The Apple III Information Analyst comes complete with two versatile software packages: Apple Business BASIC, and VisiCalc III. Apple Business BASIC — Apple's advanced, multifeatured version of the popular BASIC language — handles complex business, scientific, and engineering programming with speed and precision. VisiCalc III, the "electronic worksheet," lets you solve any problem that can be organized into rows and columns quickly and accurately.

More than a worksaver, the Apple III Information Analyst gives you the competitive edge you need to excel as a professional in budgeting, forecasting, scheduling, accounting, and other critical business and program management areas.

THE APPLE III INFORMATION ANALYST...

Increases your productivity by providing a variety of features and programs that dramatically reduce the amount of time required to perform routine tasks...

Reduces your programming time, because its feature-packed Apple Business BASIC language lets you write long, complex programs with maximum efficiency...

Extends your decision-making capabilities, because its VisiCalc III software lets you ask " What if...?" questions, and instantly calculate the results of different approaches to planning and modeling problems...

Increases the value of your time, because its powerful, problem-solving and worksaving benefits give you marketable advantages over competitors.

The Apple III Information Analyst is designed for the professional manager who can't afford to waste time — or make mistakes on important decision. Human-engineered for ease-of-use, the Information Analyst's handy, integrated keypad lets you quickly enter large blocks of figures and data. And the sculptured, typewriter-style Apple III keyboard incorporates several editing and cursor movement features that make it easier to enter text and write programs.

The real strength of the Apple III Information Analyst lies in its powerful software. You can use Apple Business BASIC to write programs tailored to your needs. And you can use VisiCalc III to prepare marketing forecasts, budgets, pricing strategies, and more.

To preserve your data, the Apple III Information Analyst incorporates a number of convenient, built-in featues, including a disk drive. Highly reliable, it lets you store and quickly retrieve up to 140K bytes of data per diskette. And as your needs expand, you can daisy-chain up to three additional, external drives to your system, without adding any control hardware or software.

Another handy, built-in feature of the Apple III Information Analyst is its clock calendar, which conveniently date stamps your files — thereby providing an especially useful way to distinguish among revisions. Also, programs with calculations that incorporate the current date or time (interest calculations, for example) can be designed to access the system directly for the data, instead of requiring an operator input. The clock/calendar has its own long-life batteries, so the system stays on time, even when it's unplugged.

When you're ready to print your forecasts, budgets, schedules, mailing labels, and other documents, the Apple III Information Analyst performs with letter perfect results. One of its built-in printer ports lets you simply plug in and print with Apple's quiet reliable Silentype thermal printer. And another built-in printer

port lets you easily connect your Apple III Information Analyst to a wide variety of high-speed printers.
Whether you're an engineer modeling with computer simulations, or a marketing manager preparing five-year sales forecasts, the Apple III Information Analyst can save you time, improve your results, and polish your professional image.
KEYBOARD/KEYPAD:
Textured, non-glare, non-slip keytops, with raised dots on "D," "K," and "5" keys for quick positioning; separate numeric keypad for calculator-style numeric entry.
DISPLAY:
12" high-resolution, video monitor, with up to 24 lines of 80 characters/spaces, and upper/lower case; color and high-resolution graphics capabilities for plotting, graphs, and other applications.
STORAGE:
System supports up to four, daisy-chained disk drives (including the Apple III's built-in unit), for a total of 560K bytes.
APPLICATIONS SOFTWARE:
Apple Business BASIC and VisiCalc III, written in Apple III assembly language.
With your Apple III Information Analyst order, you will receive:
OPTION A
• Apple III Professional Computer System, with built-in disk drive, keyboard and numeric keypad, clock/calendar, serial (RS-232) and Silentype printer interfaces, and 96K bytes RAM (128K bytes optional);
• Apple's Sophisticated Operating System (SOS) package, with: System Owner's Guide; System utilities diskette; Standard Drivers Manual; DOS 3.3 diskettes; DOS 3.3 instruction manual.
• Apple Business BASIC programming software package with: Business BASIC diskettes; Instruction manual.
• VisiCalc III software package, with: VisiCalc III diskette; VisiCalc III manual; Toolkit sampler diskette (prewritten VisiCalc III worksheets to help you get started); Toolkit sampler manual.
• Apple III Monitor (black & white);
• All necessary cabling, accessories, and blank diskettes to put your system to work immediately.
OPTION B
Same as Option A, plus:
• Second disk drive (Disk II for Apple III).
OPTION C
Same as Option A, plus:
• Second disk drive (Disk II for Apple III);
• Apple Silentype thermal printer.

TITLE: THE ACCOUNTANT/APPLE III
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Generates balance sheets, income statements and financial change in %. General ledger chart of accounts allows you to establish your own names and numbers for each client. Detail ledger with complete audit trails. Allows accountants to maintain separate disks for each customer. Allows accountant to keep track of time spent on each client's work for client billing. Give your customer the finest micro computer based services and give yourself a break. See your authorized dealer.
Our dealers are certified and trained to represent our software.
PRICE: $800

TITLE: ACCOUNTS PAYABLE/APPLE III
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Designed to interact with the General Ledger package or may be used as a stand alone module. Holds 200 active accounts, inactive accounts filed to archive disk for reference.
Partial payments made to balance or P.O. number, add accounts payable invoices, print purchase journal, detail accounts payable report, aging of accounts, check writing, check printing and cash disbursements journal. Sold only through trained and authorized dealers.
PRICE: $400

TITLE: ACCOUNTS RECEIVABLE/APPLE III
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Designed to interact with General Ledger or may be used as a stand alone system. The system allows you to add invoices, print sales journal, detail report of accounts receivable, account aging, add and update cash receipts with register, cash receipts and billing, create active and inactive files, mailing list. Sold only through certified and trained authorized dealers.
PRICE: $400

TITLE: APPLE BUSINESS BASIC
PUBLISHED BY: APPLE COMPUTER INC.

Apple Business BASIC for the Apple III Computer System is one of the most powerful versions of BASIC ever developed for a microcomputer. Designed for those who want the flexibility, power, and ease-of-use of the popular BASIC language, Apple Business BASIC incorporates a number of innovative features which can be used to satisfy some of the most demanding business and scientific programming needs.
With Apple Business BASIC, programmers can address over 70K bytes of extended memory — the largest workspace available on any personal computer. In addition, Apple Business BASIC's special 64-bit, 18-digit data type handles the toughest accounting chores with "penny accuracy."
For producing reports, Apple Business BASIC offers some of the most comprehensive and flexible formatted output capabilities found on any version of BASIC — even those used on large system mainframes. Apple Business BASIC also features advanced file handling, with flexible file formats to match applicaiton needs; 16-bit binary integer, and 32-bit binary floating point data types; 64-character variable names (all characters significant) for documentation purposes; easy access to a wide variety of plug-in peripherals or auxiliary devices; and a trace mode for debugging.
If you prefer programming in BASIC, but require more power, flexibility, and precision than most BASICs can give you, turn to Apple Business BASIC for the Apple III — an advanced language for an advanced computer system. Apple Business BASIC is supplied with all Apple III system configurations.
APPLE BUSINESS BASIC...
• Makes it easier to generate reports, because of its flexible, extensive, formatted output capabilities, and versatile PRINT USING and IMAGE statements...
• Increases system efficiency, because its large, user-available workspace (over 70K bytes) allows lengthy programs to be kept in memory...
• Adds programming flexibility, because it lets you keep multiple (up to 10) files open simultaneously, with virtually no size constraints...
• Allows you to display and calculate financial accounting data with "penny accuracy," through the use of a 64-bit, 18-digit data type and special functions...
• speeds up disk file storage, because its built-in facilities let programs read and write files more efficiently...

• Simplifies system input/output (I/O) control, because just a few key words let you control a wide variety of peripherals, as well as machine language routines and grphics facilities...
• Aids development and debugging of complex programs, because its optional ELSE statement and automatically indented listings encourage a structured approach to programming.

Apple Business BASIC is a general-purpose, problem solving language, designed especially for business and scientific applications calling for: 1) an easy-to-use debugging environment; 2) fast high precision operations — such as accounting — on numbers with a range less than $\pm 10^{18}$; 3) a high degree of output formatting for printing reports; and 4) greater flexibility for file I/O operations. Apple Business BASIC's powerful features provide the programmer with a number of advanced capabilities and conveniences.

EXTENDED USER PROGRAM MEMORY SPACE

In an Apple III Computer System with 128K bytes of RAM, Apple Business BASIC presents you with a huge, 70K byte workspace — more than is available with any other personal computer BASIC. This means you can write large programs more easily and run them more efficiently. Access time is reduced, because large files can be kept in memory — instead of on disk — and because many files can be opened for access simultaneously. In addition, large, high-resolution graphics areas can be used without fear of unduly restricting program size.

FLEXIBLE OUTPUT FORMATTING

Apple Business BASIC's versatile PRINT USING and IMAGE statements allow you to use a variety of format strings to prepare reports. Specifications are extremely flexible, and include string, literal, digit, scientific notation, and engineering notation categories.

ADVANCED FILE HANDLING

In Business BASIC, file handling is done through numbered file references defined within the program: You can make these file definitions perform chores simply by using generic terms. To print, for example, call out the generic term "printer" within the program. Apple Business BASIC works with the Apple III's Sophisticated Operating System (SOS) to handle the details automatically, including which printer you're addressing (if your system has more than one), its I/O address, etc. For greater user convenience, disk files are referenced by directory, sub-directory, and file name, without regard to the storage device on which the file resides.

LONG VARIABLE NAMES

Apple Business BASIC allows you to use variable names (up to 64 characters in length) for documentation purposes, with each character-significant. Furthermore, because spaces are used as delimiters, embedded BASIC keywords are allowed in variable names, permitting even more flexibility.

"STRUCTURED" BASIC FEATURES

With Apple Business BASIC, you can add the ELSE statement to the usual IF...THEN statement provided by BASIC. And your ELSE clauses can themselves contain other IF...THEN...ELSE constructs. Apple Business BASIC also provides a LISTing feature that automatically indents the contents of FOR...NEXT loops. These "structured" BASIC features encourage programmers to use a more logical, structured approach to developing their programs, and greatly aid development and debugging of complex programs.

POWERFUL INTERFACE TO ASSEMBLY LANGUAGE

Because Apple Business BASIC runs in the SOS environment, you don't have to worry about memory management, buffer allocation, or file handling. This freedom will save you a significant amount of programming time.

Additionally, Apple Business BASIC relates to SOS through a powerful Invoke/Perform interface mechanism. For example, if you have created assembly language routines using the disk assembler, you can specify the assembled

routine by name in an Apple Business BASIC program. Once the routines are mentioned in the "INVOKE" statement, Apple Business BASIC works with SOS to find a residence in memory for the routines, and to establish — as entry points in the resultant linked module — any function or procedure names mentioned in the routines. All you have to do is PERFORM the previously invoked routine — specifying any variables to be passed — and Apple Busines BASIC and SOS automatically handle all the operation details.
Apple Business BASIC makes life a lot easier for programmers by expanding system capabilities, reducing program development time, and adding greater flexibility to formatted output and file handling facilities.

Computer Station will offer its graphics programs for Apple III software
Graphics drivers for IDS 440, 460, 445, 560 Andex, Spinwriter, Qume
Both Hi Res screen dump and Custom Font print drivers

TITLE: GENERAL LEDGER/APPLE III
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

250 posting accounts allow for you to define your own asset and liability names. Six number code for each account. 2 numbers for departmentalizing. The maintenance file, chart of accounts file, activity file, check register file all integrate to report file. Interacts with Accounts Payable and Accounts Receivable. Generates balance sheet or profit & loss statement, screen or printer statements, accounts for current assets, fixed assets, other assets and liabilities, income statement, set revenues, expenses, Federal Income Tax expense. Graph conversion for comparison. Sold only through authorized dealers. Our dealers are certified and trained to represent our business software.
PRICE: $450

TITLE: INDIVIDUAL U.S. INCOME TAX PACKAGE
PUBLISHED BY: PANSOPHICS, LTD.

Several hundred of these packages were used very successfully for preparation of 1979 returns by both professional tax preparers and individuals. An article in the July 14, 1980 issue of FORTUNE magazine called them ... "very clever" and ... "error free".
This year's package is even more powerful than last, i.e.
The tax tables (as well as the tax rate schedules) are automatically used for the tax calculations!
Each and every line that appears on form 1040 is included this year!
Both pages one and two of form 1040 can be printed directly onto the form, and this printing facility can be used with ANY printer!
This year's Visicalc tax models don't just prepare your return. They help you plan for higher after-tax income!
Should you itemize or take the standard deduction? Sell or hold stock? File joint or separate returns? Purchase or lease business equipment? Revise your estimated income tax? Have your employer withhold more of your pay — or less?
With Visicalc and one of these powerful new tax models loaded in your microcomputer, you can get answers to questions like these instantly. Now, before you make an important personal or business financial decision, you can see its impact on your tax situation immediately, and to the penny.
Here's what Visicalc tax models do — automatically:
Calculate your tax liability using IRS tax schedules or tax tables.
Calculate your self-employment tax.
Calculate your medical and prescription expense deduction.
Calculate funds overwithheld for F.I.C.A. by more than one employer.
Calculate Schedule D losses and gains in any current-year combination.

Not only that, these models are formatted to print directly onto pages 1 and 2 of IRS Form 1040!
Hundreds of hours of preparation went into the making of these models. Furthermore, several hundred of these packages were in use last year and they have been thoroughly field-tested by certified public accountants. But they cost less than a single visit from a good tax consultant, and you'll use yours all year round for planning and estimating.
To get yours in time for the this year's tax return season, order now. We'll ship within 24 hours after we receive your order.
PRICE: $75 retail

TITLE: MAIL LIST MANAGER
PUBLISHED BY: APPLE COMPUTER INC.

Apple's Mail List Manager program for the Apple III automates the tedious, time-consuming tasks of generating and maintaining the address and telephone listings of your customers, colleagues, prospects, and personal acquaintances. Designed for professional performance and ease of use, the program stores, sorts, edits, and prints mailing labels and phone lists in their entirety, or selectively by ZIP code, name, or special user-defined key.
Each Mail List Manager entry may contain up to five lines of information — enough to include a name, addres, company name, and business phone number. As many as 916 entries can be stored on a single diskette, and any number of entries and diskettes may be merged to create a single, large mailing list.
Fast and sophisticated sorting is routine with Mail List Manager. You can sort mailing labels by name of ZIP code, and an entire diskette can be sorted in lessthan two minutes. You can even merge subsets of sorted lists to create new lists — for example, names from A to G only. And you can print letter-perfect mailing labels quickly and efficiently, too, saving hours of repetitive typing time. If you're looking for a more convenient, flexible way to keep important names, addresses, and telephone numbers organized and at your fingertips, Apple's Mail List Manager for the Apple III is the ideal solution.
MAIL LIST MANAGER...
• Increases mailing list efficiency, because it stores, sorts, edits, and prints out labels at the touch of a few keys...
• Requires no special training to use, because its menu and forms entry displays are simple and self-explanatory...
• Increases your postal communications control, because it lets you sort and print mailing labels by name or ZIP code...
• Speeds sorting, because a single diskette (holding information for up to 916 labels) can be sorted completely in only 90 seconds...
• Extends your system flexibility, because its unique, user-assignable ID codes let you set up your own custom label selection without any programming.
After inserting the Mail List Manager program diskette into your disk drive and booting your Apple III system, your screen will display a title page, followed by the program's main menu. Two of the menu's options must be used before you can begin to create your mailing or telephone lists.
INITIALIZE A DISK. The Mail List Manager program diskette helps you create the list you need, but is not intended for storage of those lists. You must prepare a blank, formatted diskette for that purpose. Select INITIALIZE A DISK from the main menu. On the screen, you'll see a display that explains, step-by-step, how to create the storage diskette.
CHOOSE DRIVE. Mail List Manager can be used with either a single or multiple disk drive system. (Note: To merge lists, a multiple drive system is required.) Once you have prepared a storage diskette, you must select the CHOOSE DRIVE option to identify the drive you'll be using to store your lists. This step is necessary whether you're using just one drive or several.

With your drive chosen, you're now ready to start creating lists. Menu option 3, ENTER MAILING LABELS, lets you simply "fill in" a form — the mailing label outline — item by item. Individual labels have ample space for a person's name, company, address, city, state, ZIP code, and telephone number (including extension, if any). There are, in addition, two special line items, Name Key and Label Key, which can be extremely useful.

The Name Key is an eight-character name code under which each label is filed for sorting purposes. Mail List Manager automatically inserts the Name Key for you. For example, if the label is for John P. Jones, the program will insert "Jones" on the Name Key line. You have the option, of course, to change the Name Key if you wish. Suppose, for example, you want a list sorted by company names instead of individuals' names. You can change the Name Key from "Jones" to "XYZ Corp," for example, without changing the way the label will look when it's printed.

The Mail List Manager program recognizes that appellations such as "Jr." or "III" are not last names, even though they sometimes occur at the end of persons' names. In other words, if you're entering a label for John P. Jones III, the program will display "Jones," not "III," on the Name Key line.

The Label Key, six-characters in length, can be used to print sublists from a primary list. Suppose you have a large list of mailing labels, and you want to keep your customers separate from your suppliers. Simply type "cust" (or some other identifier) on the Label Key line for customers, and "supp" for suppliers. Later, you can instruct Mail List Manager to print separate mailing label lists by "cust" or "supp." You can fine-tune your mailing lists as much as you want, saving yourself time, postage, and perhaps even embarrassment!

Mail List Manager also provides a tab replication feature. When you're entering labels, pressing the TAB key on your Apple III moves the cursor to the next space in the label outline. There, the entry used for that item on the preceding label is displayed, and can be instantly replicated on your new label simply by tabbing again. This feature is especially helpful when creating a number of labels for persons in the same company, city, state, or ZIP code area.

After you've created a mailing list, you can make use of the remaining items on Mail List Manger's main menu. To locate a specific name on your list, select FIND A MAILING LABEL and enter (1) the exact name, or (2) a name phonetically similar to the one you're seeking, or (3) the particular sort order for that name (for example, all labels for names beginning with "Z"). Your screen will display a "window" through which you can view the label(s) you requested, plus the labels immediately preceding and following it. And the up and down arrow keys on your Apple III keyboard let you "scroll" your entire label list if you wish — that is, roll it forward or backward onto the screen.

To revise any information on a mailing label after locating it, select MODIFY MAILING LABELS from the program's main menu. Postiion the cursor on the line(s) to be changed and type the new information over the old. It's that easy. Once you've made your revisions to the mailing list, select SORT MAILING LABEL DISK to sort your mailing labels, either alphabetically (by Name Key) or geographically (by ZIP code).

Set your printing parameters and specify the Label Key (if any) by choosing CHANGE PARAMETERS on the main menu. To print lists or labels, select LIST/PRINT LABELS. You can print all or part of a list, or only the names and phone numbers. Or you can display or review your entire label list — as it would appear if printed — on your monitor screen.

Mailing List Manager's last menu option, MERGE MAILING LABEL DISKS, allows you to merge separate lists together into one comprehensive list. In this way you can generate and print large numbers of mailing labels that span individual diskettes.

A second and third disk drive are necessary to take advantage of the powerful merge feature of Mail List Manager. Merging two lists on a three-drive system,

(when each list fills a diskette), takes approximately 8-15 minutes. A list nearly filling nine diskettes (over 8000 names) takes slightly over an hour with a four drive system.
The Apple III Mail List Manager is a sohpisticated mail list management program that gives you the kind of versatility and capacity you need to generate professional mailing labels for billing, direct mail, correspondence, or any other uses dictated by your business needs.

TITLE: APPLE III PASCAL
PUBLISHED BY: APPLE COMPUTER INC.

Available first quarter 1981. Apple III Pascal is a fully professional system development environment. It incorporates an Apple III version of the UCSD Pascal Operating System (Version 2.1) and SOS, Apple III's Sophisticated Operating System. Because it offers a compiled language, the Apple III Pascal system allows programs to execute quickly and take up minimal space. The structured programming facilities and extensive data structures in Apple III Pascal make it the language to choose for large business, scientific, and educational programs.
APPLE III PASCAL...
• Increases programmer productivity because it provides a total software development facility...
• Simplifies program design through Pascal's convenient structural mechanisms and rich variety of data types...
• Lowers development costs as extended, built-in error checking catches syntax, data type, and value range errors...
• Increases system flexibility, because it is software compatible with programs written in Apple II Pascal...
• Lowers maintenance costs because Pascal's modular structure minimizes convoluted code which is difficult to understand and modify...
• Optimizes your use of available memory, because its option processor allows you to use only as much graphics space as needed...
• Expands your programming workspace, because it automatically adapts itself to available memory — which can exceed 64K bytes...
• Allows documentation, as well as program source code, to be written and modified through the utilization of a powerful, easy-to-use text editor...
• provides flexible input/output (I/O) through its user-transparent use of Apple II's Sophisticated Operating System...
• Is the most transportable of all languages: it allows access to large libraries of Pascal programs and provides the capability to run yur own programs on most Pascal systems.
Apple III pascal has been designed for the sophisticated programmer or computer science student. Its richness of data types, control functions and powerful utility routines can dramatically improve a programmer's productivity on large projects. For this reason, Apple has selected Pascal as its standard system and applications development vehicle.
WHY UCSD PASCAL?
Since UCSD Pascal is recognized as the microcomputer industry standard, using it as a basis for Apple III Pascal gives a programmer portability. Not only can a user access large libraries of Pascal programs already in existence, but also Apple III Pascal programs can run with minimum conversion on most computer systems offering Pascal.
UCSD Pascal is more than a language: compiler, assembler, editor, linker, and file handler are integrated within a single, powerful system. This provides the user with a comprehensive set of software tools for optimal program development, and the ability to create and maintain program libraries. Built-in procedures and functions enhance the string, byte, and I/O capabilities.

WHY PASCAL FOR APPLE III?
Apple has taken advantage of all of UCSD Pascal's capabilities and can offer others as well. These include:
- Up to 64K bytes of memory for data;
- Code space limited only by total memory size of the machine;
- Easy access to Apple III's human interface features: color graphics, speaker, joysticks, and keyboard;
- Transcendental functions;
- Faster disk response and transfer rates;
- Extensive documentation.

To use Apple III Pascal, you will need the following system:
- An Apple III system with 128K bytes RAM;
- A high resolution, black and white, video monitor (Apple III Monitor recommended);
- Expansion disk drive for your Apple III.

TITLE: APPLE III SOPHISTICATED OPERATING SYSTEM (SOS)
PUBLISHED BY: APPLE COMPUTER INC.

The Apple III Sophisticated Operating System (SOS) is a powerful software interface that helps you exploit Apple III's advanced system capabilities. With SOS, you don't need to worry about most internal system functions, such as which disk drive contains a file, which bank of memory is being used, or which slot a peripheral interface card occupies. These and other functions are all controlled automatically.
Designed for easy expandability as well as operational convenience, SOS enhances and ensures Apple III system flexibility.
A simple-to-use System Configuration Program (supplied on diskette) allows even inexperienced users to custom configure SOS to meet their specific needs.
SOS Provides a solid foundation for writing advanced applications on the Apple III. It features a hierarchical file system, device level interrupt capabilities, user level interrupt capability (events), a device-independent file system, and memory management capabilities. And, since all languages on the Apple III use SOS, they all share a common disk format. For instance, a Pascal application program can access a BASIC text file just as easily as it can access a Pascal text file.
Apple's Sophisticated Operating System for the Apple III gives you the efficiency, comprehensiveness, and expandability you've always wanted in an operating system, with a degree of convenience you may never have thought possible. SOS is supplied with all Apple III systems and software.
THE APPLE III SOPHISTICATED OPERATING SYSTEM...
- Improves personal productivity, because it frees you from most system control responsibilities...
- Simplifies programming, because it provides powerful, standard device and file interfaces for all languages and applications...
- Maximizes system efficiency, by automatically controlling the use and allocation of system resources...
- Speeds up software development, by reducing program size and complexity...
- Ensures system adaptability, because it's designed for easy expansion and custom configuration.

SOS, which consists of five basic components, acts as a buffer between user programs and the Apple III hardware. Using these components, SOS controls Apple III system operation and resource allocation with a minimum of user involvement. As far as the user is concerned, handling the system's input/output (I/O) devices is as easy as handling its data files, once SOS has been configured with the proper drivers.
Configuring SOS is a quick and easy process, even for the most inexperienced

user. Simply follow the directions in the "System Configuration Program," one of the programs contained on the System Master diskette supplied with your Apple II system.
Suppose, for example, that you've added an Apple Silentype Printer to your Apple II system. To configure SOS so it will automatically control the printer, execute the System Configuration Program and select the first option on the menu, ADD A DRIVER. Then simply follow the directions displayed on the screen.
Once you've configured SOS to control your Silentype, you need never concern yourself again with its system operational requirements. SOS handles them for you — automatically — whenever you use the printer. Configuring SOS for other printers and peripherals is just as easy.
You don't have to be a system architect to get complete access to the Apple III's advanced capabilities. Apple's Sophisticated Operating System helps you control and configure your Apple III, maximizing its benefits and power in every configuration and application.

TITLE: VISICALC III
PUBLISHED BY: APPLE COMPUTER INC.

VisiCalc III is a powerful new version of the award-winning VisiCalc software, designed especially for use with the Apple III computer system. It virtually eliminates calculator, paper, and pencil in developing plans and analyzing results. Any problem you might wish to tackle using rows and columns can be solved quickly — and accurately — with VisiCalc III. You can create your own models or use an existing one from the VisiCalc III library of "tool kits." General purpose business, real estate, and financial models are already available, with more planned for the future.
Managers can use VisiCalc III to plan budgets, create forecasts, and develop pricing strategies. Financial professionals can prepare statements, compute ratios, and modify projections. Scientists and engineers can study causes, effects, and tradeoffs — all in seconds, instead of hours or days.
One of the most innovative and versatile planning tools ever designed, VisiCalc III is a powerful productivity tool for every manager and professional.
VISICALC III...
• Increases personal productivity, because of its flexibility, ease of use, and high-speed computation...
• Can be put to work immediately, because it allows you to write and use complex "programs" without learning a programming language...
• Speeds data manipulation through an extensive, built-in library of financial, statistical, and scientific functions...
• Expands the effective workspace of your monitor screen, because the Apple III's four cursor control keys allow rapid display of any portion of a large spread sheet...
• Simplifies data checking and comparison through its "split-screen" capability, which allows you to display, move, and modify widely separated entries side by side...
• Eliminates trial-and-error columnar formatting of documents, because its display — with 80 upper and lower case characters per line — prints exactly as it appears on the screen...
• Increases your data handling capabilities, because the Apple III's large, 65K-byte user memory space allows you to construct and work with very large models...
• enhances the appearance of your reports, because you can title rows and columns — and vary the numeric and graphics format — to produce the look you want.
To use VisiCalc III, simply insert the program diskette into the Apple III disk drive

and "boot" the system. On your monitor screen you'll see an electronic worksheet — resembling a columnar pad — of up to 63 columns and 254 rows. At the juncture of any column and row, you can type in words, numbers, or formulas. Your monitor screen is a "window" which allows you to view a section of the entire VisiCalc III worksheet. The window can be moved, or "scrolled," in all four directions for viewing every section. Or you can split the screen into two "windows," so that you can compare pieces of data that are in different places on your worksheet. You can even synchronize "windows" so that they move together, always keeping particular lines or columns of data next to one another.

By using either the Apple III's arrow keys, or the "GO TO" capability of VisiCalc III, you can quickly move the cell cursor to any area of the worksheet. Visible at any given time are 20 rows of data; the number of columns you can see depends on the column width you've designated. Typically, you will see at least eight columns — the same number that would fit on an 8½ inch sheet of paper.

Entering or changing values and words on the worksheet is quite straightforward, First, position the box cursor to the place where you want the data to appear (or where you wish to change data already entered). Then simply enter the new numbers or words.

Titles and column headings can be written anywhere on the worksheet. When placed either along the top or down the left-hand side, you can "lock" them into place. Once locked, the title or column heading will "follow" and identify the data associated with it, even when you move to the furthest row or column position. And you can easily unlock titles whenever you want.

When you enter a formula, it will be displayed on the top row of the screen. If you change it at some point, the new values that result will be calculated and displayed instantly on the worksheet.

Formulas can be as simple or as complex as you like. For instance, VisiCalc III can add, subtract, multiply, or divide values located anywhere on the screen — even those values derived by other formulas. A built-in function library conveniently provides many financial, scientific, statistical, and mathematical functions — including net present value, average value and transcendental functions. The result of any calculation is displayed instantly on your screen.

In addition, a replication capability allows you to repeat a formula automatically many times, with different variables substituted. For example, the formula you use to compute January's profit can be replicated to compute profits by month from February through December as well. VisiCalc III's replication feature automatically substitutes the appropriate data elements for each month.

Because VisiCalc III performs complex calculations instantly, you can play "What if...?" as often as you like to solve thousands of different problems. For example, imagine that you've created a business forecast model that takes your gross profit, cost, and net income into account. Sometime later, you begin to wonder what the impact would be if your vendors decided to raise finance charges by 2%. With a few keystrokes, you can update your forecast based on this new assumption, and VisiCalc III will perform the calculations and display the new results instantly for your review.

Another useful feature of VisiCalc III is its "Insert and Delete" editing capability. Using Insert and Delete you can add or delete entire rows or columns in your worksheet model. For instance, suppose you suddenly see that the forecast or plan you're working on is more complex than had been originally thought, and you wish to add more elements to your model. VisiCalc III's insert and Delete feature allows you to add them painlessly, without having to redeisgn the entire worksheet. Similarly, you can move entire rows or columns to rearrange pieces of data in your model. VisiCalc III automatically keeps all formulas updated, as you move pieces of your worksheet around.

VisiCalc III lets you quickly save entire worksheets as files on diskettes — including the data, formats, and location on the worksheet where the cursor was

last positioned. VisiCalc III data can also be saved by itself, without the worksheet, to be graphed or plotted by other Apple III programs.
Any printer that works with the Apple III can be used to produce a hard copy of your VisiCalc III worksheet. You can print entire worksheets, or — by specifying column letters and row numbers — only selected parts of the data.
If your job frequently involves organizing and manipulating data to prepare budgets, schedules, forecasts, or tables of information, VisiCalc III can significantly increase your productivity and improve the overall quality of your planning.
To use VisiCalc III, you will need:
• The Apple III Information Analyst System (Option A, B, or C);
OR
• Any Apple III;
• Apple III Monitor;
• Silentype or letter-quality printer (optional).

TITLE: THE APPLE III WORD PROCESSOR
PUBLISHED BY: APPLE COMPUTER INC.

Available second quarter 1981. The Apple III Word Processor is a sophisticated personal computer system designed especially for word processing. Its Word Painter software alows you to create and edit letters, memos, reports, manuals — even books — quickly and easily. And its Mail List Manager software helps you communicate more effectively with customers and business associates by making it easy to create, store, update, and print mailing labels, and address and phone lists. The 80-character/line, upper/lower case display gives you an accurate picture of what your text will look like when it's printed, while the system's sculptured keyboard makes the transition from a typewriter smooth and simple.
Reliable, powerful, and reasonably priced, the Apple III Word Processor will help you streamline clerical operations and improve productivity from the minute you turn it on.
THE APPLE III WORD PROCESSOR ...
• Simplifies document formatting, because its large 80-character/line by 24-line display gives you an accurate picture of what your printed documents will look like ...
• Minimizes training by providing a natural transition from the standard typewriter ...
• Increases your efficiency, because of its convenient, built-in disk drive...
• Maximizes your word processing productivity, because of its powerful Word Painter software...
• Reduces expansion costs, because up to three external disk drives can be added without additional control hardware or changes in software ...
• makes data retrieval easier, because its built-in clock calendar automatically identifies disk files with the correct date and time of their creation or last revision ...
• Saves you money, because its cost-effective Mail List Manager program lets you inexpensively create, sort, update, and print mailing labels and phone lists ...
• Increases system flexibility, because of its compatibility with a variety of draft- and letter-quality printers.
Tools are as useful as they're usable — and the Apple III Word Processor is the first personal computer human-engineered for word processing. The sculptured, typewriter-style keyboard is a model of utility and convenience, with a familiar layout and some special features that allow you to move almost effortlessly from point to point in the text.
At the heart of the Apple III Word Processor is Word Painter, Apple's powerful word processing software. With Word Painter, you can perform normally time-consuming operations — such as centering, indenting paragraphs, searching

for and replacing text — quickly and automatically.
To preserve your documents, the Apple III Word Processor incorporates a number of convenient, built-in features, including a floppy disk drive. This highly reliable disk drive lets you store — and quickly retrieve — up to 14K bytes of data per diskette. And as your needs expand, you can "daisy-chain" up to three additional, external drives to your system, without adding any control hardware or software.
Another truly convenient feature of the Apple III Word Processor is its built-in clock/calendar, which automatically date/time stamps files, records when a letter is written, and notes (per your instruction) whether a particular draft is the final one. The clock/calendar has its own long-life batteries, so the system stays on time, even when it's unplugged.
When your documents are ready for printing, the Apple III Word Processor makes your job simple, and ensures that the results are letter-perfect. For draft-quality printing, Apple's Silentype thermal printer is quiet, reliable, and cost-efficient — and plugs directly into the Apple III. For letter-quality printing, you can choose from a number of different printers — including Apple's popular daisywheel model (Qume Sprint 5). Because many printers offer a variety of type fonts, you can tailor your documents quickly and easily for the "look" you want. The Apple III Word Processor — the affordable answer to your word processing needs.
KEYBOARD:
Textured, non-glare, no-slip keytops, with raised dots on "D" and "K" keys for quick positioning; Alpha Lock shifts and locks alphabetic characters only, leaving all other keys unaffected.
DISPLAY:
12" high-resolution, video monitor, with up to 24 lines of 80 characters/spaces per line, upper/lower case, and high resolution graphics capability.
STORAGE:
Approximately 60 pages of text per diskette; system supports up to four daisy-chained disk drives (including the Apple III's built-in unit), for a total of 560K bytes.
APPLICATION SOFTWARE:
Word Painter, written in UCSD Pascal and Apple III assembly language; Mail List Manager, written in UCSD Pascal.
With your Apple III Word Processor order, you will receive:
• The Apple III Professional Computer System, with built-in disk drive, keyboard, clock/calendar, serial (RS-232) and Silentype thermal printer interfaces, and 128K bytes RAM;
• Apple's Sophisticated Operating System (SOS) package, with: System owner's guide; System utilities diskette; Standard drivers manual;
• Word Painter software package, with: Word Painter diskettes; Word Painter instruction manual; Word Painter keycap set and keycap installation tool;
• Apple's Business BASIC programming software package, with: Business BASIC diskettes; Instruction manual;
• Mail List Manager software package, with: Mail List Manager diskettes; Instruction manual.
• Second disk drive (Disk II for Apple III)'
• Apple III Monitor (black & white);
• Apple Silentype thermal printer (OPTION A); or
• Qume Sprint 5 daisy-wheel printer (OPTION B);
• All necessary cabling, accessories, and blank diskettes to put your system to work immediately.

TITLE: WORD PAINTER
PUBLISHED BY: APPLE COMPUTER INC.

Available second quarter 1981. Apple's Word Painter software turns your Apple III computer into a powerful, personal word processing system. You can quickly compose, revise, and print all kinds of documents, from memos and brochures to form letters and entire, book-length manuscripts.

As you enter text, Word Painter shows you — on the screen — what your document will look like when it's printed. Centered lines, ragged left and right margins, tabs and indentations — they're all displayed, so that you can check document format at a glance. And Word Painter gives you complete control over printing, too, for letter-perfect documents every time.

Paint your way out of paperwork corners, with Apple's powerful, easy-to-use Word Painter software for the Apple III computer. It's ushering in a whole new age of fast, clear business communications.

WORD PAINTER...

- Encourages fresh, creative approaches to communications by making it easy to experiment with different words, phrases, and writing styles...
- Increases productivity by eliminating repetitive, ineffificient routines such as retyping, replacing words, and centering lines...
- Gives you an accurate picture of what your documents will look like when printed, because centered lines, ragged left and right margins, and tabs and indentations are all displayed as they're entered...
- Saves time manipulating text with its powerful formatting, editing, and printing commands...
- Simplifies document design and minimizes training with helpful "forms entry" displays...
- Reduces the possibility of human error by signaling when you enter invalid commands.

Because Word Painter works with a number of special keys on the Apple III keyboard, text editing is so logical and involves so few keystrokes that it almost becomes a natural reflex — like shifting from lower to upper case on a typewriter.

The four, dedicated cursor control keys move the cursor backward or forward (character by character), and up or down (line by line). Holding down any of the four keys auto-repeats its cursor movement. When the cursor moves past the top or bottom lines displayed on the screen, the text automatically 'scrolls' — advances or backs up, as required — so that you can conveniently scan whole documents from beginning to end. Four grammatical keys on the Apple III keyboard let you position the cursor even more quickly and directly throughout the text — by word, sentence, paragraph, or page.

Some of Word Painter's most powerful word processing functions are provided through the use of two other keys. REPLACE and SELECT, on the Apple III keyboard. Using REPLACE (the key with the solid white Apple logo), you can delete text — by word — instantly. Or you can access the REPLACE mode — for one-over-one character replacement — to correct transpositions or minor misspellings.

The SELECT key is even more versatile. Using it, you can create a new document, revise a copy (without changing the original), revise the original document, protect a selected document from modification, delete a document from the diskette, print a document (either certain pages or the entire manuscript), or instantly "turn to" any page of the document you're working on.

Word Painter also features a number of special, Forms Entry displays accessed through the SET UP key on the Apple III keyboard. These word processing aids make it easy for you to define and change any document's format, from the number of spaces between lines to the space reserved for left and right margins. You format your document by "filling out the form" displayed on the screen.

Whenever you're working on the text of a document, a four-line Status Display is present at the top of the screen, reminding you of various information, including left/right margin settings and page number. This is a handy reference which reminds you of the document format you've specified.
Word Painter also provides a number of powerful commands that let you quickly format, move, copy, and protect text. There's a separate key on the Apple III keyboard for each command.
Word Painter also provides a number of powerful commands that let you quickly format, move, copy, and protect text. There's a separate key on the Apple III keyboard for each command.
Word Painter also features a powerful "search and replace" capability. Suppose that you've misspelled or misused a word throughout a document. Using the SEARCH and REPLACE keys on the Apple III keyboard, you can correct the misspelling or replace the word wherever it occurs — one instance at a time, or all at once and automatically.
Once a document is ready to be printed, Word Painter gives you a fine degree of control over the way it will finally look on paper. You can adjust all settings — margins, line spacing, etc. — quickly and easily.
And print functions such as underlining, bold printing, subscripting, or superscripting can all be specified wherever you like. Word Painter also lets you print selected pages of a report (readers see only what you want them to see), or as many as 999 copies of an entire document.
Whether you're a busy executive who needs closer control over written communications, or a beleaguered office administrator fighting the paperwork explosion, Apple's Word Painter software has been designed for you. It's the only professional word processing software with a personal touch.

APPLE III PERIPHERALS

TITLE: DISK II FOR APPLE III
PUBLISHED BY: APPLE COMPUTER INC.

Disk II for the Apple III Professional Computer System is a floppy disk drive subsystem that allows you to increase the data storage capacity of your Apple III as your needs expand.
The Apple III Computer System accepts up to three external disk drives, in addition to its one built-in drive, for a total on-line storage capacity of 560K bytes. And because the Apple III was designed for easy, inexpensive system expansion, no extra control hardware or software are required as you add second, third, and fourth drives.
As your storage requirements increase, expand your system's capacity with Disk II for the Apple III — Apple's professional, reliable disk storage subsystem.
DISK II FOR APPLE III...
• Increases your system's capabilities, by offering you up to 560K bytes of on-line storage capacity...
• Maximizes your system's flexibility, because it allows you to expand disk storage in step with you needs, in convenient, 140K-byte increments...
• Simplifies interfacing, because it quickly plugs in, and doesn't require any additional control hardware or software.
Installation of the disk subsystem couldn't be easier. The first external drive that you add to your system just plugs into the back of your Apple III. Then up to two more drives can be added in "daisy-chain" fashion, simply by plugging the second drive into the first, and the third into the second. There are no separate power cords to tangle up, because the Apple III supplies power directly to the disks.
Whether you add expansion drives to the Apple III Information Analyst, the Apple III Word Processor, or any other system configuration, Apple III's

Sophisticated Operating System (SOS) automatically takes care of all interface software requirements for up to three external disk drives. Once your expansion drives are installed, SOS automatically identifies the number and the name of each whenever you start up your system. SOS also automatically maintains and updates content directories of each diskette in a system drive. This allows you to access data — directly by file name — from any diskette in any of the drives. The additional storage capacity provided by the Apple III Disk II expansion drives can speed up many of the common operations you perform with your Apple III. For example, adding just one expansion drive to your system cuts the time required to make a back-up copy of a diskette from minutes to seconds.
In addition, some Apple III programs require more than one disk drive to perform certain functions. For instance, some programs — such as Apple's Mail List Manager — need two drives to merge data files from two different diskettes into a separate, single file. Similarly, program development in Apple Pascal requires two or more disk drives.
Whether you want to increase your storage capacity or extend your system capabilities, Disk II for Apple III lets you quickly and easily expand your Apple III Professional Computer System.

TITLE: APPLE III MONITOR
PUBLISHED BY: APPLE COMPUTER INC.

Apple's portable, 12-inch (diagonal), black & white monitor displays 80-character by 24-line text and high resolution graphics with precision and high readability. Designed for use with Apple III computer systems, it will also display 40 characters per line when used with Apple II or Apple II Plus computers, or when the Apple III is operating in Apple II emulation mode.
The Apple III Monitor connects easily to your Apple computer via a standard cable, supplied with every Apple III system. Up-front controls are concealed behind a flip-down panel below the display, and include power on/off, contrast, and brightness, as well as vertical and horizontal hold. Vertical linearity and height controls are located on the rear panel.
The monitor's case colors match the colors of the Apple III computer, giving the whole system an appearance as professional as its performance. Whether you're performing word processing or preparing sales forecasts, this dependable, 12-inch black & white monitor gives you the "big picture" you need to produce effective communications.
THE APPLE III MONITOR...
• Displays highly readable characters and graphics, because its sharp resolution extends over the entire screen, even in the corners...
• Allows quick adjustment of its display, through a bank of convenient front-panel controls...
• Easily positions to your most comfortable viewing angle, fitting either on top or to the side of your Apple III computer...
• provides years of trouble-free service, with its heavy-duty case and quality construction throughout.

TITLE: APPLE JOYSTICK
PUBLISHED BY: APPLE COMPUTER INC.

Available first quarter 1981. The Apple Joystick is a true X-Y paddle control interface that's fun to use and simple to integrate into all kinds of programs. Easy to hold, it features a control shaft that moves a full 360 degrees, a push-button "fire" switch, and a three-position, mode selecting, toggle switch.
The Joystick was designed for use with Apple II. Apple II Plus, and Apple III systems. With the Apple III, up to two Joysticks can be used, both of which plug into existing sockets in the back of the system. The Apple II and Apple II Plus

each accept a single Joystick, which simply plugs into the game I/O socket in either machine.
A uniquely-designed mechanical interface converts the Joystick's shaft motion to two analog signals (one for the X axis, the other for the Y axis). The result is a superbly professional "feel" and sensitivity that makes other paddles seem cumbersome.
Whether you employ it in applications requiring advanced hand input capabilities, or just use it to play a more stimulating game of Apple Trek, the Apple Joystick gives you an unbeatable degree of responsive, reliable control for your Apple computer system.
THE APPLE JOYSTICK...
• Increases your handheld input capabilities, with its sensitive, 360-degree X-Y movement and positioning control...
• Adds design and control fexibility, with its supplemental button and toggle switches...
• Simplifies program development, especially with the Apple III, because of its simple software interface...
• Improves the "feel" of manual control, because of its smooth action, spring-loaded control shaft, and easy to hold and operate design...
• Increases the accuracy and reliability of handheld control, because of its trueanalog-to-digital conversion...
• Easily interfaces with Apple systems, via built-in ports.

TITLE: APPLE III UNIVERSAL PARALLEL INTERFACE CARD
PUBLISHED BY: APPLE COMPUTER INC.

Available first quarter 1981. The Apple III Universal Parallel Interface (UP) Card lets users attach a variety of parallel-mode printers — including most dot matrix models, plus some thermal and daisy wheel units — to Apple III computer systems, Included with the Card is a diskette containing an operating system driver, which lets you custom configure the card to work with the printer you are using.
Because the UPI Card also emulates two Apple II interface cards — the Centronics Interface Card and the Parallel Interface Card — it's able to control your printer directly from Apple III software, or from Apple II software running in emulation mode. And it spares you from having to juggle different cards for different jobs.
The Apple III UPI Card can also be used with equipment other than printers, functioning as a general-purpose, parallel input/output interface. Sixteen output lines (two groups of eight lines each) and eight input lines provide wide data paths for sending, receiving, and acknowledging data transfers. Other features of the Card's general-purpose function include: control signals with software-selectable priority; a programmable pulse-length strobe line; and software interrupt capabilities.
Because it's three cards in one, the Apple III Universal Parallel Interface Card gives you the convenience of printer plug-compatibility, the economy of Apple II printer emulation, and the flexibility of a fully-featured parallel interface.

THE UNIVERSAL PARALLEL INTERFACE CARD...
• Increases system flexibility, by permitting control of a wide range of dot matrix, thermal, and daisy wheel printers...
• Reduces system costs and hardware requirements, by providing complete Apple II parallel printer emulation...
• Broadens the Apple III's capabilities, because it can also be used as a powerful, general-purpose parallel input/output port for a wide range of custom applications.

TITLE: APPLE III OEM PROTOTYPING CARD
PUBLISHED BY: APPLE COMPUTER INC.

Apple's OEM Prototyping Card is a convenient, modular printed circuit card on which to build custom interfaces for the Apple III Computer System. The card offers ample space to handle the majority of interface designs. It accommodates most integrated circuits and components, and has built-in facilities for attaching a variety of edge connectors and switches to your circuits. Also included are decoupling networks and shields to ensure maximum immunity from RF noise.

Equally important, the OEM Prototyping Card assures you of Apple product quality and compatibility. The card is double-sided, with plated-through holes for positive connection. And its 50-pin, gold-plated edge connector plugs right into any unused expansion slot in your Apple III, giving you complete access to all of the signals on the bus.

Even the most advanced custom interfaces for the Apple III are easier to design and more reliable to use, when you start with Apple's OEM Prototyping Card.

THE APPLE III OEM PROTOTYPING CARD...

- Simplifies designing even the most advanced system interfaces, with its convenient, built-in RF shielding, power bus, and other features...
- Allows greater flexibility, because it accepts a wide range and combination of components mounted in various positions...
- Saves you time and money implementing Apple III custom interfaces, by reducing the effort required to assemble working prototypes...
- Assures you of Apple reliability and compatibility, because of the card's high-quality printed circuits, connectors, and construction.

APPLE III SECTION 2

Automotive Parts House/Pkge. 2AP III-1
Case/Client History Files 2AP III-1
Equipment Maintenance Management 2AP III-1
Food Wholesale Manager 2AP III-1
Health Care Programs 2AP III-1
Insurance Agency/Broker Pkg. 2AP III-2
Inventory Control/System Package 2AP III-2
Patient Accounting/Medical Offices & Clinics 2AP III-2
Patient File 2AP III-2
Special Software for a Variety of Applications 2AP III-2

TITLE: AUTOMOTIVE PARTS HOUSE/PKGE.
PUBLISHED BY: VERTICAL MARKETS SOFTWARE INC.

Put control on all the parts, part numbers, new parts, part replacements, price increase, shipping information, supplier information, stocking level, turnover rate of each item, evaluate inventory, purchase orders generated, write invoices from inventory.
PRICE: $300

TITLE: CASE/CLIENT HISTORY FILES
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Primarily for attorneys who must use reference material frequently. Enter keyword for each case and do search by keyword for cases relating to your present case. Excellent for law students, new attorneys or legal secretaries.
PRICE: $150.00

TITLE: EQUIPMENT MAINTENANCE MANAGEMENT
PUBLISHED BY: VETICAL MARKET SOFTWARE INC.

A preventive maintenance approach to businesses that have expensive equipment to service. With the skyrocketing cost of doing business, preventive maintenance programs in your plant could save many hours of down time and help decrease overall maintenance costs. Main file contains: description of each piece of equipment, location, purchase price/date, warranty dates, scheduled maintenance dates, unscheduled work, who performed work, time, list of qualified workers for special equipment, generate work orders for day or week.
PRICE: $150.00

TITLE: FOOD WHOLESALE MANAGER
PUBLISHED BY: VERTICAL MARKETS SOFTWARE INC.

Inventory/invoicing program that allows you to update inventory as it is sold or shipments come into inventory. Track perishable items by shipment, service your customers by offering the most up-to-date information on your product lines, prices, print sale price, quantity used to date, customer files, history, credit lines, low turnover items. If you ship to many locations from one inventory, this program is a must. Load shipments by truck stops, computer will schedule routes by shipments off truck.
Sold only through certified and trained dealers.
PRICE: $495.00

TITLE: HEALTH CARE PROGRAMS
PUBLISHED BY: VERTICAL MARKET SOFTWARE, INC.

Professional health care and medical applications for micro computers:
Billing Pkg.
Accounting Pkg.
Medical Records System
Literature File
Lab Applications & Interface
Continuing Education
Appointment Scheduling
Patient History/Files
Intensive Care Monitoring
Drug Interactions
Emergency Room
PRICE: See local dealer

TITLE: INSURANCE AGENCY/BROKER PKG.
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Create information files with this data base. Customer data up to 25 fields of information, customer accounting, rate customers by pay habits, customer account has up to 20 fields of information, company data (agency policy is with),sales data. This package is for small agencies to spend less time on paper work and more time servicing accounts. Sold only through certified and trained authorized dealers.
PRICE: $429.00

TITLE: INVENTORY CONTROL/SYSTEM PACKAGE
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Designed for businesses which need a constant monitor and up date on inventory information. Invoices may be written and items automatically deducted from inventory. Extend prices a variety of ways; by lbs., quantity, etc. Generate a series of reports for evaluating quantity on hand in dollar volume, units sold, units on order, etc. Excellent program for warehouse or distributor. Holds 1600 items. Records invoice numbers, customers, totals, etc.
PRICE: $350

TITLE: PATIENT ACCOUNTING/MEDICAL OFFICES & CLINICS
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Apple III Software for medical offices designed to perform accounting of charges and receipts, billing, insurance processing and financial and practice analysis. Designed for small medical groups. Written for general medical office personnel and does not require elaborate training. Step by step manual and documentation. Modifications made if you so desire. See your local authorized dealer.
PRICE: $1500

TITLE: PATIENT FILE
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

Record patient history, patient activities, office visits, hospital visits, prescriptions, treatments, etc. All the information you presently store in the file cabinets can now be kept on diskettes and printed for hard copy. Will be of great service for your patients come tax time. Give them a detailed report of these activities without any extra effort on your office.
PRICE: $200

TITLE: SPECIAL SOFTWARE FOR A VARIETY OF APPLICATIONS
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

See your authorized dealer for details on these programs.
Distributor/Warehouse Management System
Contractors Project System
Manufacturing in Process Control System
Candy & Tobacco Wholesales
Employment Agency Pkg.

BOOKS

This section covers everything from manuals for the Apple to Computer Humor, from programming to building a robot. Books listed here are just a few of those available. A wide variety of computers are covered and these publishers do an excellent job of staying current on various topics of interest. It is good to study several different publishers to get a broad working knowledge of any topic. Most of these can be found at your dealers book shelf. We highly recommend computer Stations "Programming Guide to the Apple" for an all around good reference to the Apple II.

The Apple Card BK-1
Apple Pascal Reference Manual BK-1
Applesoft Tutorial BK-1
Apple II Basic Programming Manual BK-1
Apple II Floating Point Basic Manual BK-1
Apple II Reference Manual BK-1
6502 Applications Book BK-2
The Best of Creative Computing Volume 3 ..... BK-2
Computer Graphics Primer BK-3
Computer Shopper BK-3
6502 Games BK-3
Hardware Manual BK-4
Introduction to Low Resolution Graphics BK-4
The Pascal Reference Card BK-4
Programmer's Guide to the Apple II BK-4
Programming Manual BK-4
Programming the 6502 ..... BK-4
Some Common Basic Programs BK-5
Programmer's Guide to Apple II BK-6
Expandable Programmer's Guide to the Apple II BK-6
Byte Books BK-6
Compusoft BK-6
Dilithium Press BK-6
Hayden BK-7
Matrix BK-8
McGraw-Hill BK-8
Osborne BK-8
Prentice-Hall BK-8
Howard W. Sams BK-9
Scelbi BK-10
Sybex BK-10
University Software BK-10
Van - Loves BK-10

TITLE: THE APPLE CARD
PUBLISHED BY: MICRO-WARE DISTRIBUTING INC.

NEW — THE APPLE CARD — PLASTIC 8½ x 11 Reference Card for the APPLE.

PRICE: $3.98

TITLE: APPLE PASCAL REFERENCE MANUAL
PUBLISHED BY: APPLE COMPUTER

Introduces the experienced Pascal programmer to the Apple Pascal system, which includes UCSD Pascal plus extensions for graphics and other special functions. Describes use of the Pascal editor, compiler, and linker, as well as the 6502 assembler used to process time-critical assembly-language routines. Also discussed are the system intrinsic functions and procedures, special features for the Apple II, file formats, the P-machine, and utility programs. Supplied free with LANGUAGE SYSTEM.

PRICE: $19.95

TITLE: APPLESOFT TUTORIAL
PUBLISHED BY: APPLE COMPUTER

A self-teaching guide to APPLESOFT BASIC, companion volume to the Apple II FLOATING POINT BASIC MANUAL. Closley follows the format of the Apple II BASIC PROGRAMMING MANUAL, which is a tutorial for Apple II Integer BASIC. Assumes no previous programming experience. Explains fundamentals of Applesoft BASIC, including number formats, editing, tape and diskette operations, graphics, strings and arrays, etc. Humorous sytle and numerous examples. Supplied free with Apple PLUS Computers.

PRICE: $10.00

TITLE: APPLE II BASIC PROGRAMMING MANUAL
PUBLISHED BY: APPLE COMPUTER

Starts from the beginning with how to plug in the Apple II. It then guides the user's first programming efforts. A humorous style and abundant examples make this the ideal textbook for newcomers (and children) to personal computing (125 pages). Supplied free with Apple II Integer system and INTEGER FIRMWARE CARDS.

PRICE: $5.95

TITLE: APPLE II FLOATING POINT BASIC MANUAL
PUBLISHED BY: APPLE COMPUTER

Describes the Apple II FLOATING POINT BASIC. (See features of Applesoft II under the APPLESOFT FIRMWARE CARD in the HARDWARE section of this catalog.) Supplied free with Apple II Plus systems and APPLESOFT FIRMWARE CARDS.

PRICE: $10.00

TITLE: APPLE II REFERENCE MANUAL
PUBLISHED BY: APPLE COMPUTER

New and completely revised manual detailing the inner workings of the Apple II and Apple II Plus computers. It is an advanced technical manual aimed at users having some experience with BASIC and needing to know more about the hardware and circuits, the on-board firmware, and the use of the monitor and machine language. 196 pages of detailed information plus complete circuit schematics. Supplied free with newer Apple II systems. Replaces the old "Red Manual".

PRICE: $19.95

TITLE: 6502 APPLICATIONS BOOK
PUBLISHED BY: SYBEX

This book presents practical applications techniques for the 6502. You can build a complete home alarm system, including fire detection, as well as an electornic piano, a motor speed regulator, a time-of-day clock, a simulated traffic control system, and a Morse code generator. You could also design an industrial control loop for temperature control, including analog-to-digital conversion, and your own simple peripherals from paper-tape reader to micro printer. Truly the "input-output" book for the 6502, it includes more than 50 exercises designed to test yourself at every step.

PRICE: $12.95

TITLE: THE BEST OF CREATIVE COMPUTING VOLUME 3
PUBLISHED BY: CREATIVE COMPUTING

336 pages of articles, activities, fiction, games, programs, reviews, cartoons, and other information from the 1977 issues of Creative Computing. Includes features on technology, public access, educational use, medical applications, and computers in music. Contains great resource listings and reviews of calculators, games, equipment, software and books. There are 96 pages of things to do—puzzles, programs, problems, and games.
A sample of the diverse contents is listed.
TECHNOLOGY — PRESENT AND FUTURE
Trends Into the Future — Gray
EFTS: Living is Better Electronically, or IS It — Dragunas
The World in Your Own Notebook — Lees
Eeny, Meeny, Micro and More — Salisbury
The Pocket Computer is Almost Here — Ahern
Microprocessors — A Primer — Cohen
PUBLIC ACCESS
Computing at a Public Library — Shair
Computer Power to the People — Ahl
A Dream For Irving Snerd — Nelson
Time for a National Computer Club — Kuzmack
The Microcomputer Inflicts "Future Shock" on TEchnical Education — Vuillequiz.
COMPUTERS IN EDUCATION
Interactive Computing in Secondary Schools in France
A Microcomputer Software Course — Williams
Computer Science at Carnegie-Mellon University — Hast
Final Exams — Eisenberg
Computational Unsolvability — Steen
State-of-the-Art vs. Compatibility — Ahl
LANGUAGES AND PROGRAMMING THEORY
Something is Missing — Finseth
File Structures — Lees
PILOT — Yob
A Taste of APL — Finseth
ARTSPEAK — Friedman
FICTION AND FOOLISHNESS
The Land of Halco — Rowlett
Them Hobbyists — Dunion
Computer Control — Vitale
Yellow Computer — Ragen
Edu-Man Meets Pseudo Hero — Ahl
Edu-Man Meets the Rumor Mongers — Ahl
The Lighter Side of Robots

The Lighter Side of Computer Dating
Nords — Sunstone Graphics
Glorobots — Maxson
The Floating Point Solution — Taylor
Martsport — Sonntag
Out of the Mouths of Babes — Wirth
Still a Few Bugs in the System
GAMES
Othello — Wright
SWARMS — Miller
EUCHRE — Raybaud
Daytona 500 — Churchill
REVIEWS OF CALCULATORS
Sophisticated Electronic Pocket Calculators
OF GAMES
Smart Electronic Games — Ahl
Comp IV — Gray

TITLE: COMPUTER GRAPHICS PRIMER
PUBLISHED BY: SAMS

A computer graphics primer book written by Mitchell Waite, published by Howard W. Sams. This paperback covers Apple's high-resolution graphics including many pictures and examples, as well as other machines to allow the reader to compare systems.
PRICE: $12.95

TITLE: COMPUTER SHOPPER
PUBLISHED BY: COMPUTER SHOPPER

Buy, Sell or Trade all types of computer equipment and software (pre-owned and new) among 20,000 readers nationwide.
FEATURES:
Low classified ad rates - 10¢ a word.
Hundreds of ads from individuals
Categorized ads so you can find them instantly.
Large (11 by 14") easy to read pages.
Subscribe now for $10 and receive 13 issues/year (one FREE plus 12 regular issues). After receiving your first issue if you're not completely satisfied you may have a 100% refund and you still keep the first issue free. Bank cards accepted.
BONUS: If you have something to advertise (pre-owned or software) send in a classified ad with your subscription and we'll run it FREE.

TITLE: 6502 GAMES
PUBLISHED BY: SYBEX

This book is designed as an educational text on advanced programming techniques. It presents a comprehensive set of algorithms and programming techniques for common comptuer games. All the programs are developed for the 6502 at the assembly language level. The book covers virtually all aspects of advanced programming: effective algorithm design, data structures design, and effective coding techniques related to storage economy.
The reader will learn how to devise strategies suitable for the solution of complex problems, typical of those encountered in games. He/she can also use all the resources of the 6502 and sharpen his/her skills at advanced programming techniques (291 pp. w/illustrations).
PRICE: $12.95

TITLE: HARDWARE MANUAL
PUBLISHED BY: MOS TECHNOLOGY

This manual is directed to the hardware designer who wants detailed information about the 6502 microprocessor used in the Apple II and related chip set (165 pages).

PRICE: $10.00

TITLE: INTRODUCTION TO LOW RESOLUTION GRAPHICS
PUBLISHED BY: SCELBI

Explains how to program simple graphics on the Apple II, PET, and TRS-80 computers. Describes the display maxtix and fundamental graphics statements. Tells how to plot basic objects and build a library of graphics routines. Introduces animation methods by simple examples. Discusses details of a complete animated game of football, coded for the Apple II.

PRICE: $9.95

TITLE: THE PASCAL REFERENCE CARD
PUBLISHED BY: MODULAR SOFTWARE

The Pascal Reference Card is a remarkably compressed assemblage of almost everything needed to program in Pascal. On one folded 8 1/2 x 11" card, all the following data are easily available: ASCII chart, Procedure and Function definitions, Reserved and Predefined words, I/O Error return, Setup Parameters, P-code chart, and Operators with Precedence. Imagine the amount of page turning and data hunting this will save! The Pascal Reference Card is only $2 at your dealer's.

TITLE: PROGRAMMER'S GUIDE TO THE APPLE II
PUBLISHED BY: COMPUTER STATIONS, INC.

This 40 page booklet consolidates the information needed as a handy tool for ease of programming. It's a "thick" reference card" (including peeks, pokes, calls, disk commands, monitor commands, reserved words, etc.) and an absolute must for every programmer.

PRICE: $4.95

TITLE: PROGRAMMING MANUAL
PUBLISHED BY: MOS TECHNOLOGY

This manual addresses the internal structure and assembly language programming of the 6502 microprocessor. It assumes that the reader is moderately familiar with computer concepts (239 pages).

PRICE: $10.00

TITLE: PROGRAMMING THE 6502
PUBLISHED BY: SYBEX

An educational text designed to teach 6502 programming from the ground up. Addresses the needs of virtually every programmer interested in using the 6502 microprocessor. Takes the reader systematically through the concepts and techniques needed to write increasingly complex programs. Discusses basic concepts, hardware organization, programming techniques, the instruction set, addressing, I/O, and data structures. Includes examples and exercises.

PRICE: $11.95

TITLE: SOME COMMON BASIC PROGRAMS
PUBLISHED BY: COMPUTER STATIONS, INC.

This package includes the book "Some Common Basic Programs" and a diskette with the programs converted to Applesoft and debugged.

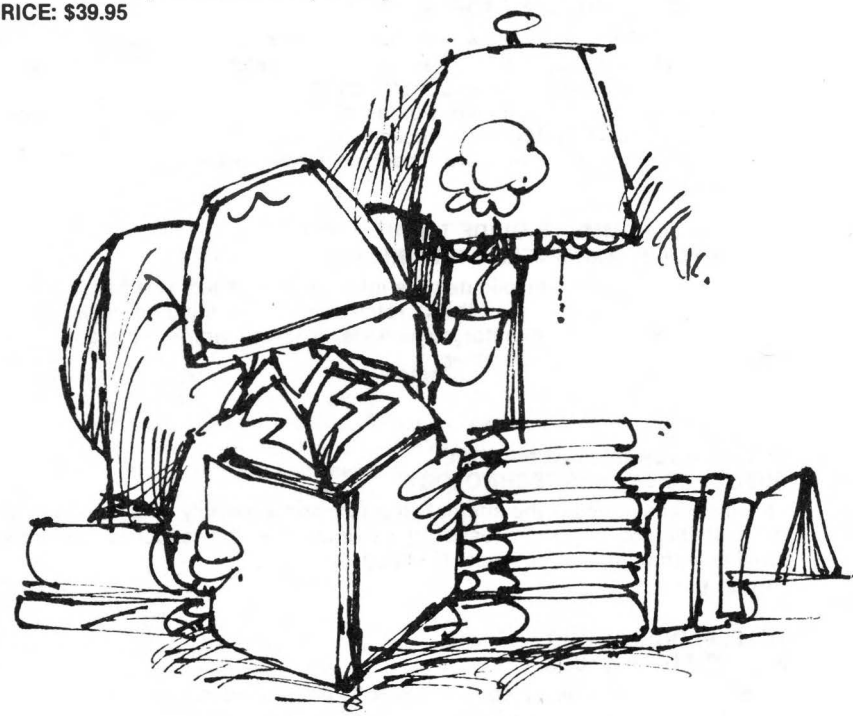
The book is the one written by Lon Poole and Mary Boarchers and published by Adam Osborne & Associates, Inc. The programs fall under four categories; Business, Mathematics, Statistics and Miscellaneous.

When you boot the diskette, the menu appears with the four categories mentioned aove. After you select one, you are then given a catalog of all programs in the selected category. You may at any time call up the catalog of all the programs if desired.

A few of the approximately 75 programs are: Future Value of an Investment; Depreciation Rate; Mortage Amortization Table; Coordinate Conversion; Prime Factors of an Integer; Roots of Quadratic Equations; Matrix Inversion; Normal Distribution; Mean, Variance, Standard Deviation; Linear Regression; and Anglo to Metric Conversion.

NOTE: You must receive a copy of the book with purchase of the diskette since the diskette may not be sold separately.

PRICE: $39.95



TITLE: PROGRAMMER'S GUIDE TO APPLE II
PUBLISHED BY: COMPUTER STATION

40 page booklet consolidating reference material for programming the Apple in Basic. Includes reserved words, peeks pokes, calls, disk commands, etc.

TITLE: EXPANDABLE PROGRAMMER'S GUIDE TO THE APPLE II
PUBLISHED BY: COMPUTER STATION

Notebook fashion reference book with sections on Applesoft, Pascal, Assembly language, Basic 80 (for Microsoft Z-80 card), references for VISICALC, APPLEWRITER, MACRO-SCED, etc. Includes pockets front & back to hold diskettes. Includes all the info in Computer Station's Programmer's Guide to the Apple II plus much more.
Available first quarter 1981.

BYTE BOOKS

Beginners Manual for UCSD Pascal $11.95
Byte Book of Computer Music $10.00
Byte Book of Pascal $25.00
Superwumpus $7.99
You Just Bought a Personal What? $11.95

COMPUSOFT

Basic Handbook $14.95
Controlling the World with TRS-80 ..... NA
Learning Disc BASIC & TRS-DOS ..... NA
Learning Level II $15.95

DILITHIUM PRESS

Home Computers/Volume I - Hardware $8.95
Home Computers/Volume II - Software $8.95
Step by Step: Introduction to 8080 System $7.95
Beginning Basic $9.95
Home Computers/Beginners Glossary and Guide $6.95
Robots on Your Doorstep $6.95
8080 Machine Language Programming for Beginners $6.95
Starship Simulation $6.95
8080 Microcomputer Experiments $15.95
Introduction to Basic: A Case Study $7.95
Interactive Computing with Basic $13.95
Computing w/FORTRAN $16.95
COBOL for Students $13.95
Understanding Computers $8.95
Peanut Butter and Jelly Guide $7.95
Using and Programming the 6800/6802 ..... $7.95
From the Counter to the Bottom Line $12.95
Instant Basic $9.95
My Computer Likes Me $3.95

From Dits to Bits $12.95
Microcomputer for External Control Devices ..... NA
How to Get Started with CPM ..... NA
Small Computers for Small Business ..... NA
Best of Interface Age: Software $12.95

HAYDEN

Basic Microprocessors and 6800 ..... $12.90
Basic Computer Programs for Science and Engineering ..... NA
S-100 Bus Handbook $12.95
Game Playing w/computers, 2nd $18.30
Basic Workbook $6.45
Basic BASIC $9.45
Game Playing w/Basic $8.60
The Mind Appliance $8.60
Microcomputers in the 3R's $7.95
Basic w/Style: Programming Proverbs $6.45
First Book of KIM $10.75
6800 Microprocessor: Self-Study Course $8.60
First Book of Microcomputers $5.35
Microcomputer System Design $16.95
PASCAL with Style: Programming Proverbs $6.95
Basic Computer Programs for the Home $8.95
SARGON: Computer Chess Program $15.95
10 Easy Pieces - Creative Programming for Fun & Profit $7.95
8086 Primer $8.95
Software Design for Microcomputers $6.95
Introduction to 8080 & Z-80 Assembly Language Programming $7.95
Stimulating Simulations $4.95
Stimulating Simulations (for Atari) $4.95
Fundamentals & Applications of Digital Logic Circuits, 2nd $8.60
Designing Microcomputer Systems $8.95
Consumer's Guide to Personal Computing & Microcomputers $8.60
How to Build a Computer-Controlled Robot $8.60
FORTRAN w/Style: Programming Proverbs $7.50
Basic from the Ground Up $9.65
How to Profit from your Personal Computer $9.65
COBOL w/Style Programming Proverbs $7.50
Advanced Basic $9.65
FORTRAN Fundamentals $5.35

MATRIX

Microcomputer Dictionary and Guide $19.95
Introduction to Basic $9.95
Fundamental Principles of Microcomputer Architecture $19.95
Microcomputer System Principles w/6502 KIM $16.95
Introduction to Microprocessor Systems Engineering $19.95

MCGRAW-HILL

Fortran IV Pocket Handbook $2.45
Hands-On Basic with the Pet $11.95
Introduction to Microprocessor System Design $15.95
Primer of Structured Program Design $12.50
Programming in Basic with TI Home Computer $10.95
Programming with Basic $5.95
Progamming with Fortran $5.95
Basic Microprocessing Fundamentals Hardware/Software $11.95
Electronic Games $21.50
Personal Computing $19.95

OSBORNE

Intro to Microcomputers VOL 1, Basic Concepts $9.50
8080 Programming for Logic Design $9.50
6800 Programming for Logic Design $9.50
Some Common Basic Programs $12.50
Payroll w/Cost Accounting $20.00
8080A/8085 Assembly Language Programming $12.50
Z-80 Progamming for Logic Design $9.50
6800 Assembly Language Programming $12.50
Accounts Payable/Accounts Receivable $20.00
General Ledger $20.00
Z-80 Assembly Language Programming $12.50
Payroll w/Cost Accounting C Basic $20.00
Accounts Payable/Accounts Receivable C Basic $20.00
General Ledger C Basic $20.00
Intro to Microcomputer VOL 0, Beginners' Book $7.95
6502 Assembly Language Programming $12.50
Running Wild: The Next Industrial Revolution $3.95
Pet Personal Computer Guide $15.00
Pet & the IEEE 488 Buss ..... NA

PRENTICE-HALL

Scientific & Engineering Problem Solving w/Computers $20.95
Intro to Computer Programming w/Basic Language $12.50
Basic Programming for Business $12.95
Basic for Everyone $11.95
APL: Language and its Usage $23.50
Intro to Computer: Tool of Business $17.95
Programming Style, Design, Efficiency, Debugging & Testing $17.95
FORTRAN IV Self-Taught $12.95
Non-Technical FORTRAN $12.95
Data Structure and Programming Technique $17.50
Data Structure and Management: 2nd $17.50

Algorithms + Structures = Program $21.95
Microprocessor System Design $22.50
Let's Talk LISP $16.95
Structured Approach to Programming $19.50
FORTRAN IV w/WATOFOR & WATFIV $12.95
Digital Logic and Switching Circuits $18.95
Collection of Programming Problems & Techniques $15.00
Flowcharting $8.95
Basic Programming for Scientists & Engineers $12.95
Discipline of Programming $21.95
Guide for Programmers $9.95
Learning Basic Fast $10.95
Microcomputer Design $9.95
Software Design for Microcomputers $9.95
Structured Programming & Problem Solving w/PASCAL $12.95
Primer on PASCAL $10.95
Interactive Computer Graphics $20.95
Microprocessor and Microcomputer Basics $16.95
Machine & Assembly Language Programming w/PDP-11 ..... $17.95
Introduction to Pascal $14.95
Computer Games $10.05
Microcomputer Management & Programming, 1980 ..... NA
Microcomputer Interfacing, 1980 ..... NA

HOWARD W. SAMS

TTL Cookbook $9.50
TV Typewriter Cookbook $9.95
CMOS Cookbook $10.50
8080A Bugbook $10.50
How to Program Microcomputers $8.95
Your Own Computer $1.95
Getting Acquainted w/Microcomputers $8.95
Z-80 Microcomputer Handbook $8.95
Cheap Video Cookbook $5.95
Fundamentals of Digital Computers $9.95
DBUG: An 8080 Interpretive DBUGR $4.95
Microcomputers: Analog, Converter, Sftwr., Hdwr. $9.50
8080/8085 Software Design $9.50
Logic/Memory Experiments Using TTL Integrated Circuits, I $9.95
Logic/Memory Experiments Using TTL Integrated Circuits, II $9.95
Interfacing & Science Data Communication Experiments $5.95
Intro Experiments in Digital Electronics, Vol. I $12.95
Intro Experiments in Digital Electronics, Vol. II $10.95
Incredible Secret Money Machine $5.95
Microcomputers for Business Applications $8.95
Basic Primer $8.95
S-100 & Other Micro Buses $5.95
Z-80 Microprocessor Programming/Interfacing Book 1 ..... $10.95
Z-80 Microprocessor Programming/Interfacing Book 2 ..... $12.95
Microcomputer Interfacing 8255 PPI Chip $8.95
8080/8085 Software Design Book 2 ..... $9.95
TEA 8080/8085 ..... $8.95
TRS-80 Interfacing $8.95
Crash Course in Microcomputers $17.50
Computer Graphics Primer $12.95

Programming & Interfacing for 6502 ..... $11.95
Computer Dictionary: 3rd. Ed. $12.95
Microcomputer Primer: 2nd Ed. $11.95
CMOS: Basics, Circuits, & Experiments $8.95
6502 Software Design $9.95
Introduction to Microcomputers for the Ham Shack $4.95
Z-80 Microcomputer Design Projects $12.95

SCELBI

PIMS/Personal Information Management System $9.95
8080 Galaxy Game $9.95
Z-80 Instruction Handbook $4.95
Calculating with BASIC $7.95
6800 Software Gourmet Guide & Cookbook $10.95
8080 Software Gourmet Guide & Cookbook $10.95
Introduction to Low Resolution Graphics $9.95
Microcomputer Potpouri $2.95
Z-80 Software Gourmet Guide & Cookbook $14.95
Understanding Microcomputers $9.95
6502 Software Gourmet Guide & Cookbook $10.95

SYBEX

Intro to Personal & Business Computer $6.95
Microprocessors $10.95
Programming the 6502 ..... $12.95
Microprocessor Interfacing Techniques $15.95
Programming the Z-80 ..... $14.95
Programming the Z-8000 ..... $14.95
6502 Applications Book $12.95
6502 Games Book $12.95
Microprocessor Lexicon $2.95

UNIVERSITY SOFTWARE

Small Business $49.95
Education & Scientific $34.95
Fun & Games #1 ..... $14.95
Fun & Games #2 ..... $14.95
Home & Economics $24.95

VAN — LOVES

1981 Apple Software Directory $13.95
1981 Educational Software Directory for the Apple $7.95
1981 Business Software Directory for the Apple $7.95
1981 Game Software Directory for the Apple $7.95
So You're Thinking About Buying a Computer (How to buy a computer) $8.95
Atari Software Directory $7.95
Computer Humor $4.95
Apple-cations/Defined Applications for the Apple Computer $12.95

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SUGGESTIONS/BUSINESS SECTION

Just a couple of suggestions. Many, many other programs in this book will apply to specific uses.

DOCTOR — GP
Medical Secretary
Medical Billing
Medical Ed. Programs
Data Bases
Word Processing
Soft Care
Physicians Recall System
Vita Facts (for reception room)
Patient File
Mail List

LAWYER
Supertext II
Magic Window
Professional Time Management
Client Billing System
Visi Calc
Desk Top Planner
Speechlink 2000
Supertalker
Case History

BANKER
Visi Calc
Interest and Loans
Desk Top Planner
Loan Analysis
Stock Evaluator
Financial
Master Tax
Accounting System
Word Star
Word Star Mail Manager
APR Loan Analysis

SMALL BUSINESS OWNER
IBMS
Insoft Accounting System
General Ledger
Accounts Payable
Accounts Receivable
Payroll
Inventory
Textwriter III
Word Star
Aardvark Tax Programs
Bus. Plus
Micro Ledger

DENTIST
Dentistaid
Soft Care
Patient File
Dental Management System
CCA Data Management
Mailing List
Case History

SALES MANAGER
Apple Writer
Desktop Planner
Mail List Manager
Order/Entry Invoicing
Information Master

CONTRACTOR
General Ledger Accounting System
Accounts Payable
Accounts Receivable
Job Costing
Payroll
Project management
Survey
Master Tax
Payroll

ACCOUNTANT/BOOKKEEPER
General Ledger Accounting System
Payroll with Cost Accounting
Mail List
Visi Calc
Visi List
Legal Accounting
Master Tax
Payroll
Cash Flow Analysis
CPA/Tax
Ledger Plus

SECRETARY
Word Processing
Mail Lists
Typing Tutor
Appointment Calendar
Clothing Store
Payroll

MANUFACTURING
Warehouse/Distributor Pkg.
A/P, A/R, Job Costing
Costing
Machine Part Quoting
Insurance Agency
Order Entry

DRUG STORE
General Accounting System
Patient File History

RESTAURANT
Payroll
Inventory
Visi Calc

REAL ESTATE
Listings
Financial Pkg.
Income Property Analysis
Lease Management

RETAILER
Controller
Cash Register
Inventory
Cashier

PLANT MANAGER
Attendance Record Employees
Budgeting By Department
Cash Flow Analysis

INSURANCE AGENCIES
KISSS Financial Programs
Insurance Agent/Broker Pkg.

TITLE: ACCOUNTING ASSISTANT
PUBLISHED BY: INSTANT SOFTWARE
MEMORY: 16K

This package will help any businessman solve many of those day-to-day financial problems. Included are:
Loan Amortization Schedule - This program will give you a complete breakdown of any loan or investment. All you do is enter the principal amount, interest rate, term of the loan or investment, and the number of payments per year. You see a month-by-month list of the principal, interest, total amount paid, and the remaining balance.
Depreciation Schedule - You can get a depreciation schedule using any one of the following methods:
Straight line, sum of years digits, declining balance, units of production, or machine hours. Your computer will display a list of the item's lifespan, the annual depreciation, the accumulated depreciation, and the remaining book value.

PRICE: TAPE, 7.95

TITLE: ACCOUNTS PAYABLE
PUBLISHED BY: COMPUTER HOUSE DIV.

Prints list of payables with vendor number, name, invoice number, date & amount plus grand total. Also prints aging list with same information by 0-30 days, 31-60, 61-90 and over 90 days. Prints check for any invoice, all invoices for any vendor, or all checks for any aging group above, including two stubs with invoice numbers & check account balance on writers stub.

PRICE: $95.00

Same as above except interactive with general ledger (automatic posting), much more extensive. **$195.00**

TITLE: ACCTS. PAYABLE/RECEIVABLE
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Disk accounting system for business use. Generates and tracks purchase orders and invoices. Up to 500 active accounts. 32K.
PRICE: $175.00

TITLE: ACCOUNTS RECEIVABLE
PUBLISHED BY: COMPUTER HOUSE DIV.

Prints list of receivables with customer number, name, invoice number, ship date & amount plus grand total. Also prints out aging list with same information by 0-30 days, 31-60, 61-90 and over 90 days. Also prints statements with dunning remarks.

PRICE: $95.00

Same as above except interactive with general ledger (automatic posting), much more extensive. **$195.00**



TITLE: THE ADDRESS BOOK
PUBLISHED BY: MUSE SOFTWARE

The Address Book stores names, addresses and telephone numbers on disk and accesses them quickly to print mailing labels on any standard printer. But that's not all! With the addition of a DC Hayes MicroModem, the Address Book is an automatic telephone dialer. Even without a printer or modem, The Address Book is an efficient name and address file. Be selective with the program. A user definable category system allows you to classify or group records together to suit your specific needs. You can select records for viewing. label printing or automatic telephone dialing. Select by name, initials, street, city, zip code, telephone area code or record category code. The address Book lets you store up to 700 records on each data disk, and features an efficient sort enabling you to quickly sort hundreds of records. A variable printer format allows you to print from 1 to 6 labels across on your printer. The Address Book includes a complete list of states and their standard 2 character abbreviations, which can easily be displayed as you are entering an address. The state list can be modified or expanded by the user.
PRICE: $49.95

TITLE: ADVERTISING MESSAGE PROGRAM FOR APPLE
PUBLISHED BY: CONNECTICUT INFORMATION

A new cassette computer program converts an Apple computer system into an automated advertising machine for retail stores, restaurants, banks, hotel lobbies and trade shows. This program called "Multi-Message with the Interleaved Kaleidoscope" permits 10 messages (up to 255 characters each) in letters 10% of screen height x 4 lines x 28 characters/line. There can be up to 3 "page" per message. Characters are "puffed" on at the rate of 2 per second, and appear in a bluish-white tint on color TV.
A random, dynamic, colored kaleidoscope pattern (of user-determined duration) attracts and holds viewer attention between messages. Instructions for setting up messages are "intermixed" with program code on the cassette, and also appear on screen, so that unsophisticated users are actually "led through" the operating procedure, rather than following "pre-instruction".

TITLE: APARTMENT BUILDING INVESTMENT ANALYSIS
PUBLISHED BY: REALTY SOFTWARE

Anlayzes the investment potential of an apartment building.
PRICE: 15.00

TITLE: APARTMENT MANAGER
PUBLISHED BY: SOFTWARE TECHNOLOGY FOR COMPUTERS

2 disk drive, menu driven program written in assembly language and APPLESOFT II. All you will ever need to manage your apartment. Handles up to 6 BUILDINGS with a maximum of 120 units each. Complete turnkey operation. Data categories include APT #, TYPE, TENANT NAME, PETS, CHILDREN, SECURITY DEP., PET DEPOSIT, POOL DEP, MISC DEP, RENT ALLOWANCES, DATE MOVED IN, VACANCY DATE, REFFERAL, CONDITION OF APT, DAMAGE AMT and COMMENT LINE. Search, sort, enter, edit and vacate tenates. Maintains a MTD and YTD rent receipts as well as complete utility reports, rent lost by vacancies. Maintains expenses, vacated tenants reports and much more. Program Diskette and instruction manual.
PRICE: $325.00

TITLE: APPOINTMENTS
PUBLISHED BY: AND
MEMORY: 48K RAM/APPLESOFT FIRMWARE CARD
HARDWARE: DISK DRIVE PRINTER (opt.)

The APPOINTMENTS program package allows the user to manage an appointment book using the APPLE II computer. Appointments may be viewed directly on the monitor screen or listed on a printer, if one is available. One day appointments are visible on the screen which may be scrolled up or down in order to view the entire day.

The APPOINTMENTS system provides the following features:

1. User definable starting and ending times.
2. User definable appointment separations.
3. User definable number of characters (maximum) allowed per appointment name.
4. Adding appointments for multiple appointment slots.
5. Delete specified appointments.
6. Jump to any specified day in the appointment book.
7. Search by name (or partial name) for an appointee over any specified appointment screen up or down.
8. Search by name (or partial name) for an appointee over any specified region of days in the book.
9. Scroll appointment screen up or down.
10. Move through the appointment book one day at a time, forwards or backwards.
11. Activate new dates in the book at any time.
12. Deactivate any dates in the book at any time.
13. Add entire groups of appointments to a single day all at once.
14. Show which dates are active in the book.
15. Erase all appointments over a specified time in a given day.
16. Enter and automatically display a comment on any day in the book.

PRICE: DISK, 60.00

TITLE: THE APPOINTMENT CALENDAR
PUBLISHED BY: CHARLES MANN & ASSOCIATES

The Appointment Calendar is a system suitable for Physicians, Surgeons, and other Medical specialties as well as such profesional service professions as Law and the Accountancy. The flexible system also provides an orderly appointment scheduling system for such diverse operations as Beauty Shops and public service agencies.

The system can handle an unlimited number of client groups each containing up to 10,000 active clients. The system can schedule up to 19,000 appointments per group and is flexible enough to allow operations for single practice practicioners and group service operations. The menu driven system allows the down loading of old information into a separate historical records element to allow for long term continuous operation.

The Appointment Calendar allows the receptionist to create temporary and permanent client files which are also useful for such outside operations and billings and client follow up, and to schedule appointments either on the phone or at the office. The receptionist can select such options as "next available appointment" or "an appointment by date" and the system will display the available appointment times. A simple key stroke selects the appointment, enters it onto the daily appointment log, and prints a mailable appointment notice for the client.

The system can schedule appointments of any given length and can be set up for any length operating day. The system easily provides for set break and lunch periods as well as providing a facility for blocking out such non-service days as vacations and holidays. The system will print appointment logs for any given day allowing for pre-appointment phone reminders, and hard copy daily operation. The system will prepare mailable notices for appointment reminders, predetermined appointments and appointment rescheduling. Past records can be scanned for easy follow up service.
The system comes with full documentation and an on screen "HELP" facility. The system is designed for the Apple II or Apple II Plus computer and requires 48K of RAM, at least two Minidisk drives, and an 80 column printer.
PRICE: $189.95

TITLE: APPLE II MANAGEMENT INFORMATION SYSTEM
PUBLISHED BY: PROGRAMMA

An excellent tool for medium to small businesses. The integrated system maintains the General Ledger, calculates the Payroll data, prints Checks, prints Statements, provides 941 Information, delivers Financial Reports, etc. It will maintain, age and reconcile the Receivables. The Inventory files provide the user with order points and print-outs. The Payables are integrated with the General Ledger Check Register and the system reminds the use of discounts and terms. The Customer Information System maintains a Data Base for mailing and the creation of separate files by population types; i.e., user groups.
Any segment of the Management Information System can be isolated for cost analysis. The flexible system design allows the user to maintain multiple sets of records with one operating program. This system is fully documented and is a Turnkey operation. The step by step instructions allow installation and training to be unusually trouble free.
Version 1-001 of the Management Information System has been specifically designed for the Retail Computer Store. Incidently, this system can adapt very easily to any small business, and entry points for formatting report design and account structure are fully documented.
The Management Information System is delivered on four (4) diskettes. Each module within the system can be self-operating, or each can be integrated to function as part of the system. An APPLE II Computer with 48K, dual DISK II drives, and a hardcopy printer are the hardware requirements to operate the Management Information System. The modules that comprise the system are:

1. General Ledger (G/L)
2. Accounts Receivable (A/R)
3. Accounts Payable (A/P)
4. Inventory Control (I/C)
5. Payroll (P/R)
6. Job Costing
7. Customer Information System

PRICE: Complete Management Information System 995.00
Independent Modules 150.00

TITLE: APPLE PAYROLL
PUBLISHED BY: LENZ, MASTERSON & ASSOCIATES

This single disk payroll includes: printing of paychecks, 941's and W-2's; hourly rate plus bonus; multiple state taxes; seniority list; all pay frequencies plus combinations; user-changeable tax rates; Source listing and file layouts; parametered dummy variables; update service; easy to read and follow documentation.
PRICE: $99.95

TITLE: APPL-PAY SYSTEM MODIFICATIONS (Rev. 4)
PUBLISHED BY: C.P.I.

Calculates Earned Income Credit. Calculates State Disability Insurance accumulated in QTD & YTD Employee Master. Deduction 10 has been set aside for SDI for California, however any business which requires an accumulated deduction into QTD and YTD may use Deduction 10. Implemented Deduction types 3 and 4 (amount or percent with declining balance). Written and Voided Check Program added to system. Addes Screen Displays to indicate what is taking place in the System. Start up procedure that allows the operator to enter the date and other company information when the system is initialized. The Company name may now be printed in the headings on all reports. System allows for serial or parallel printer (system has only been tested on Centronics 779 and Integral Data Systems Paper Tiger printer with parallel interface). 96 column check. 96 column W2 forms. Replaced Retirement fields with E.I.C. fields (Earned Income Credit as required by new Federal Regulations). The system now directs the operator to press the return key instead of typing "Go" to continue after aligning paper for the reports. The Employee File Maintenance run-time has been decreased (test run on 100 employees takes 10 minutes now). All known problems have been corrected. Documentation on all above has been revised.

TITLE: APR LOAN ANALYSIS
PUBLISHED BY: REALTY SOFTWARE

This program module has been prepared specifically for loan brokers, investors or others interested in the actual annual percentage rate (APR).
It provides the ability to evaluate and compare various loans based on the time period, indicated interest rate and loan fees (points).
The true APR may be derived by varying any one of the three basic parameters to establish the best interest rate available among any number of options.
PRICE: DISK or TAPE, 20.00

TITLE: A/P, A/R, JOB COST AND JOB ESTIMATING
PUBLISHED BY: COMPUTER HOUSE DIV.

Enter, edit, delete, display and/or print accounts payable ageing report for one or all vendors, retains all vendor names and addresses for check writing. Posts all payables to the job cost file by job number. Labor may also be included in job

cost file. Closes each payable item when check is written. You cannot write two checks for the same item in the auto mode.
Enter, edit, delete, display and/or print accounts receivable, bank report, ageing report, statements for one or all customers and invoices. Retains all customer names and addresses both bill to: and ship to: and automatically prints these just by entering the customer's number. Automatically computes discounts where allowed and extends prices. Computes sales tax when desired and totals the invoice.
Job estimating leads the operator thru up to 150 items for a job, extends prices for each, allows any percent of profit and/or burden and displays or prints summary with total in a quotation format.
Job cost accumulates all costs for each job number as the payables are entered, also allows labor costs. Displays or prints summary of costs for a job number to date. Compares job estimate and job cost to show profit or loss to date.

PRICE: $310.00

TITLE: ASSET RECORD SYSTEM
PUBLISHED BY: CHARLES MANN
MEMORY: 16K

This program is designed to maintain the inventory values of capital stock in a small business. Purchases of furniture and equipment are entered and recorded in the system. The program accumulates investment tax credits and straight line depreciation values for the business. The system includes sort elements for examination and auditing of the company capital equipment. The generalization structure of the program allows old record system values to be entered without the need for major duplication of existing records. The system establishes a record system needed for IRS audits.

PRICE: TAPE, 49.95 DISK, 54.95

TITLE: ATTENDANCE RECORDS FOR EMPLOYEES
PUBLISHED BY: COMPUTER HOUSE DIV.

Record and review any employees name and absence information. Generates seven reports, including tabulations of the number of absences by weekday, by date, by reason for each month, and by length of absence. Also, printed out, is a listing of employees names and their absence information. Prints a notification report for an individual employee when maximum number of absences are exceeded for certain reasons.

PRICE: $250.00

TITLE: BILLINGS MANAGEMENT
PUBLISHED BY: CHARLES MANN
MEMORY: 16K

The program is designed for the small business with a small level of monthly billings to handle. The system prepares invoices, packing slips, monthly statements, and a monthly ledger for each account. The system is designed for daily invoicing and monthly statement preparation. Invoicing includes all major data on orders shipped and provides printed copy for accounting records. The monthly statements include data on previous balances, current total charges, payments received and amount due for the month. Statements and invoices are printed on plain paper with all required data.

PRICE: DISK, 99.95

TITLE: BOWLING LEAGUE SECRETARY
PUBLISHED BY: MIGHTY BYTE
MEMORY: 48K, APPLESOFT IN ROM
HARDWARE: SINGLE DISK DRIVE

Calculates full statistics for the individual bowler on a weekly basis. Fields include the following: name, team #, handicap, total pins, # of games, average, 200's count, hi game (scratch), hi series (with handicap).
Calculates the following fields for the team on a weekly basis: team #, team name, wins, losses, percentage, team total pins, team average, team high game, team hi series.
All the user need key in is three weekly scores per man (after initially setting up the league on disk.) Program provides for sub records and weekly blind scores. Provides for custom reporting to a printer.
PRICE: DISK, 24.95

TITLE: BUSINESS AND FINANCE
PUBLISHED BY: PROGRAMMA INTERNATIONAL

A complete, concise financial analyst that allows the user to perform many calculations necessary for making decisions. Includes: Depreciation, Interest, Loans, Investments, Deposits, and Amorization. APPLESOFT 32K.
PRICE: TAPE $19.95

TITLE: BUDGETING BY DEPARTMENT (BBD)
PUBLISHED BY: EDUCATIONAL PROGRAMMING

Vol. I white pages: 65 pp.
Vol. II white pages: 93 pp.
Courseware:
Guides managers in developing a budget, from sales forecast to profit and loss statement. An update of one portion of the budget can be automatically carried forward into later budgets. Blue pages provide worksheets which allow manager to compare budgeted with actual figures for control purposes. Finally, the user can review the budget, entering key actual figures to determine the major source of variance.
Vol. I - Pre-budget Planning (MA1); The Manufacturing Budget (MA2)
Vol. II - The Selling Expense and the General and Administrative Expense Budget (MA3); Cost of Sales Budget and Profit & Loss Statement (MA4)

TITLE: BUSINESS PLUS
PUBLISHED BY: ADS

We invite you to compare this versatile system. Price, features, expandability ... Business Plus works on most printers — parallel and serial — in the unlikely event that your printer is not compatible, we can customize the package for a nominal charge.
JUST LOOK AT THESE FEATURES!
Up to 2200 transactions per diskette.
Available in both upper and lower case and upper case only version.
Standardizes all of your invoices, statements, purchase orders, credit memos and more.
Automatic sales tax computations.
Prints mailing labels.
Sales can be instantly recalled and compared against another period.
Bargraphs compare (in full color) income vs. expenses.
Checks issued automatically with detailed check register.
Accounts Payables package makes it easy to keep track of your obligations.

Detailed account aging reports that show 30-60-90 and over 90-day transactions.
Built-in Formatter and Backup programs create new data diskettes when you need them.
Frees your time for more productive work.
Designed by a small business owner and has been operating on his system for OVER TWO YEARS!

TITLE: BUSINESS SOFTWARE/PEACHTREE
PUBLISHED BY: MARKETING DEPARTMENT RETAIL SCIENCES, INC.

Software: Accounting (General Ledger, Accounts Payable, Accounts Receivable, and Payroll. Any of these may be licensed and used in a stand alone manner, or they may be combined for an integrated system.)
Inventory List.
Mailing List.
Hardware Requirements: An Apple II computer with 48K of RAM, two Apple II disk units, 40 characters by 24 line screen, 132-column printer, language card, and the Z-80 Softcard from Microsoft. The Softcard converts the Apple II into a CP/M-compitable system.
Systems Software: CP/M and Microsoft BASIC are included with the Softcard kit, licensed separately from Microsoft.
Documentation: A four-part User's Manual for each software package. Subjects include:
General System Overview
System design and capacities
How the computer operates
Program descriptions
How to operate the programs
How to use the sample data
Installation guidelines
Suggested routine procedures
Error messages
Sample company report and file listings
Technical file specification
License Arrangement: Packages are available to the end user for a one-time license fee. License period is thirty years.
Capacities: Assuming a single data diskette contains 125K characters of usable space, the following is the approximate maximum number of account records per disketts: General Ledger — 500 accounts in Chart of Accounts; Accounts Receivable — 500 customers in Customer File; Accounts Payable — 350 vendors in Vendor File; Payroll — 250 employees in Employee File; Inventory — 700 items in Inventory File; Mailing List — 700 Name and Address records.
The GL, AR, and AP capacities will most likely be less than mentioned since the monthly transactions for these systems (journal entires, invoices, check, etc.) will "compete" for the same disk space until the disk is full. Multiple data diskettes may be used for most systems (such as Inventory) to overcome capacity limits.
See CP/M Section of this Book for details.

TITLE: BUSINESS UTILITY 1
PUBLISHED BY: POWER SOFT
MEMORY: 16K, APPLESOFT

Business Utility 1 is the first of two business programs dealing with the areas of real estate, banking, securities, leasing, investment analysis and statistics. The program allows rapid access to 10 frequently occurring business decisions in areas which require speed and accurate analysis of data. The sub-routines

presented in the program are:
•Linear Regression-Exponential Curve Fit
•Accumulated Interest/Remaining Balance
•Wrap-Around Mortgage
•Discounted Cash Flow Analysis/Net Present Value
•Interest at Maturity-Securities
•Discounted Securities Analysis
•Internal Rate of Return
•Direct Reduction Loans-Sinking Fund
•Depreciation Schedules
•Amortization Schedules

PRICE: TAPE, $14.95

TITLE: BUSINESS UTILITY 2
PUBLISHED BY: POWER SOFT
MEMORY: 16K, APPLESOFT

Business Utility 2 is the second in a collection of programs applicable to Real Estate, Banking, Investments, Securities and Insurance analysis requirements. The programs have been written to be as efficient and easy to use as possible with maximum emphasis on input/output format. Business Utility 2 is a complement to Business Utility 1 and contains the following sub-routines:
•Calendar Functions
•Best Curve Fit Analysis
•Constant Payment to Principal Loan
•Advanced Payments To A Loan
•Add-on Date Installment Loan
•Savings-Compounding Period Different From Payment Period
•Interest Rebate — Rule of 78's
•Simple Interest
•Interest Conversions
•Let's Make A Deal

PRICE: TAPE, $14.95

TITLE: CASH REGISTER/INVENTORY
PUBLISHED BY: COMPUTER DISTRIBUTOR
MEMORY: 48K

Program accommodates up to 2,000 items per diskette, and allows up to 250 designated cash drawers in which to place you sales. It will sort a complete inventory by either item code number or alphabetically. Good program for retail or cash sales.

PRICE: Disk, $129.95

TITLE: CASH-FLOW ANALYSIS$
PUBLISHED BY: ALPHA-OMEGA SYSTEMS, INC.

Predicts cash crunch. Determines optimum cashflow using payment priorities and receivable probabilities. Measures impact of possible purchases on cashflow. Documents financial ability.
PRICE: $129

TITLE: CASH RECEIPTS AND DISBURSEMENTS
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Disk program keeps track of check transactions for business. Categorizes, sorts, generates summaries and audit trails. 16-32K.
PRICE: $99.95

TITLE: CASHMASTER
PUBLISHED BY: TREEBRANCH TECHNOLOGY

Among other things, your business requires control of your retail sales transactions and inventory turnover. Day to day records of sales, cash, customer accounts, and inventory are a must. A written copy of each transaction and a cash register tape are one way of handling this need, but sorting and compiling all the day's activities by hand is bothersome, time consuming, and error prone. By using the computer as a cash register as well as a compiler of the day's activities, the amount of time and effort involved in record keeping can be cut to a minimum.
CASHMASTER is an interactive, high-speed, cash register system designed for front counter, day to day usage in a retail environment. Information quickly and easily entered into the CASHMASTER is used to generate customer receipts, daily money reports, and inventory turnover information. A file of items and prices in the system ensures that correct prices are applied to all products. Security codes at select points in the system ensure that confidential and important information is protected. The system is capable of caculating totals, discounts, sales tax, and change, so the salesperson's or cashier's workload is greatly reduced, speeding the task of sales writeup and reducing errors and fatigue.
Dual disk drives and a 40-column printer are required to run this program. Optional peripherals include: a second printer for reports, an electric CASH DRAWER, and a Mountain Hardware CLOCK/CALENDAR (see descriptions in HARDWARE section of this catalog).
Some features are:
Up to 100 transactions recorded per day or shift.
Up to a 1000 item price list with description, 3 prices, and tax code automatically recalled directly into the current transaction.
Complete and detailed breakdown of the day's activities with copies of all transactions and voids.
Optional DATALOGGER (included) allows use of the system as a time clock, event recorder, etc.
Software included to trigger an electric release cash drawer.
Optional time of day record on each transaction. APPLESOFT ROM 48K.
PRICE: DISK $250.00

TITLE: CASSETTE INVENTORY
PUBLISHED BY: RAINBOW
MEMORY: 16K INTEGER

This program is general in design and may be used for many types of inventories. Allows for item number, item description, stock amount, reorder amount, restock date, item cost, and retail price. Functions are build files, update stock levels, list, scan, change, reorder point, add new items, and delete items. Holds up to 104 items. A very basic program.
PRICE: TAPE $35.00

TITLE: CHECKBOOK
PUBLISHED BY: COMPUTER DISTRIBUTORS
MEMORY: 48K

This program is extensive enough to reconcile and manage a medium business. It prints a complete checking account statement, with a check register, account summary, activity summary and transaction summary. Program will do a specific item sort. Accommodates 750 checks per diskette.

PRICE: Disk, $49.95

TITLE: CHECKBOOK
PUBLISHED BY: PROGRAMMA INTERNATIONAL

This program was designed for ease of operation since each option is totally self-promoting and self-explanatory. Includes: POST CHECKS & DEPOSITS; LIST CHECKS & DEPOSITS; RECONCILE; BALANCE; and SEARCH by outstanding checks, specific date, payee, memo, item #, amount, and index. Control "A" will give you hard copy. Allows for multiple checkbooks. APPLESOFT 48K.

PRICE: DISK $34.95

TITLE: CHECKWRITER
PUBLISHED BY: COMPUTER HOUSE DIV.

Prints checks with two stubs. Asks date, first check number and bank balance once at beginning of the run. Prints payee name and address to show in window envelope. Prints payee stub with date, amount and up to 4 comments (to describe items or invoices being paid). Prints your stub with all above information plus payee name and remaining bank balance.

PRICE: $25.00

TITLE: CLIENT WRITE-UP
PUBLISHED BY: THE SOFTWARE HOUSE, INC.
TITLE: COMMUNICATION SKILLS

CLIENT WRITE-UP is a computerized General Ledger System which has been designed to aid accountants and bookkeepers in the preparation of financial reports.

CLIENT WRITE-UP is a full General Ledger System, and includes up to ten Cash Journals, a General Journal, and a fully user-defined Chart of Accounts with Branch and Departmental accounting. The working reports generated are: Chart of Accounts Listing, Transaction Listings from Cash and General Journals (Cash journal listings serve as check registers.), Trial and Final Posting Reports (Final Posting Report is General Ledger Distribution Report.), Income Statement (Current and YTD amounts with percentages.), Balance Sheet (Assets and Liabilities shown on separate pages.), Accountant's Compilation Report (optional).

Also included in the CLIENT WRITE-UP System is a simplified Payroll Module which accumulates employee earnings and withholding information. The reports and forms available from the Payroll Module are: Employee Earnings Report, From 1099, and Form W-2.

CLIENT WRITE-UP is simple to use and incorporates many advanced time and labor-saving features. Included with each system is a VERY COMPREHENSIVE fifty-plus page Manual and User's Guide.

CLIENT WRITE-UP requires an APPLE II with 48K, dual disk drives, APPLESOFT and an 80 column printer.

PRICE: $200.00

TITLE: CLIENT BILLING SYSTEM (C.B.S.)
PUBLISHED BY: HIGH TECH

"C.B.S." is a complete client billing system for the Apple II computer. Its use is intended for any business where client billing has become so voluminous that manual billing methods have become difficult to manage. For example, it is particularly well-suited to satisfying the billing needs of CPA's and attorneys. It is a system capable of capturing, tracking, and analyzing all of your client transactions. Its special features include:

*JOB COST ANALYSIS
TRANSACTION ANALYSIS

EASY TO USE: Excellent documentation! In fact, one chapter of the user manual tutors you through a trial run of the system. Also, "C.B.S." is structured around a "menu select" feature, allowing you to interact with the system by simply typing one character to select a program from the "MENU" of programs.

FEATURES: There are 4 basic transaction types:

(1) hourly employee
(2) billable expenses
(3) payments received
(4) bids or estimates

You are provided with hard-copy reports as follows:

* listing of all entries in the transactions file
* Listing of hourly transactions
* listing of billable expenses
* listing of all rates held in the rates file
* billing statements
* JOB COST ANALYSIS: Gives you a detailed report of all expenses on a particular project/client and compares the total expenses against the bid (or estimate).
* TRANSACTION ANALYSIS: Gives you a detailed report of all transactions on file for each employee, and provides a "total summary" after each employee. Or you may opt to receive the same report on one individual only.

FILE CAPACITY: "C.B.S." was written to assist the small businessman in the tracking and billing of clients' transactions. It is a flexible system. It can be used by those who need to have 10 (or less) hourly rates or by those who have use for as many as 500.

There are 2 major files used by the system: The RATES file which holds the hourly rates for each employee, and the TRANSACTIONS file which holds all client transactions. The maximum number of rates that can be entered into the RATES file is 500.

Depending upon the structure of your business, you may be able to enter up to 900 transactions in one billing period. Below is the formula you will need to use to determine the maximum capacity of the TRANSACTIONS file for your particular business:

R = the number of rates you decide to store in the RATES file (from 1 to 500).
P = the maximum # of individual projects 'active' during any one billing period. (A project is 'active' if it carries a non-zero balance.)
M = the maximum # of transactions you will ever need to enter for any one individual project.

Once you have determined what you think are valid figures for R, P, and M for your business, fill the figures into this formula'
S = R x 41 « P x 158 « M x 100
100
If you have one disk drive only:
Subtract S from 400 to arrive at the maximum number of transactions you may enter during one billing period.
If you have two disk drives:
If S is less than 400, you may enter up to 900 transactions during one billing period. If S is more than 400, then this system will not meet your needs.
Excellent for most small Business applications.
PRICE: $300.00

TITLE: COMMUNICATION SKILLS
PUBLISHED BY: EDUCATIONAL PROGRAMMING
Vol. 1 white pages: 62 pp.
Courseware:
Volume I deals with written communication skills. The user sees a segment of poorly-written text, along with a readability index. The index measures sentence length, wordiness, use of personal pronouns, passiveness, and level of abstraction. The user then must try to improve the readability of the text, using a simple text editor. User can also type in own written samples. MA1 deals with letter and memo writing, MA2 with reports.
Vol. II white pages: 56 pp.
Courseware: design incomplete. Available early 81.
PRICE: To be announced.

TITLE: COMPLETE BUSINESS SYSTEM
PUBLISHED BY: VIDEO WORLD
This program combines the General Ledger, Payroll, and Customer information programs. It must have either one or two disk drives and you must specify which you want. In the two drive system your files are on drive two while your program is on drive one. This is a powerful business system.
PRICE: Disk 200.00

TITLE: CONSTRUCTION COST/PROFIT ANALYSI$
PUBLISHED BY: REALTY SOFTWARE
This program is designed to aid builders and investors in making knowledgeable decisions concerning building project potential profits.
The analysis considers the effects of interest rates, legal fees, demolotion, building costs, land costs, land draw and financing on the total amount of cash necessary for completion of the project. The analysis also calculates the return on investment, leverage achieved and total dollar profit potential based on user estimated sales price.
As many scenarios as desired may be analyzed varying the amounts of building costs, land cost, interest expense and other construction cost data. Potential projects may be analyzed allowing the comparison of different construction on the same building site or similar construction on different building sites.
Analysis may be printed for a permanent record. This is a good series.
PRICE: $20.00

TITLE: COSTING
PUBLISHED BY: COMPUTER HOUSE DIV.

This program covers up to 200 descriptions and costs.

PRICE: $28.00

TITLE: CPA/TAX PROFESSIONALS
PUBLISHED BY: MICROTAX

Here's how you can solve your professional practice development problems. Are you satisfied with the growth of your tax practice? Our field tested professional tax preparation software can help! One tax practitioner reported his tax season income jumped from $12,000 to $30,000 using a micro computer. It can happen to you too!!

TITLE: CUSTOMER INFORMATION
PUBLISHED BY: VIDEO WORLD

This program keeps your customer purchase records. You enter the information of his purchase and can recall or update at any time. This also stores name, address and phone no. so you have a permanent record. This system is available with an optional mailing list routine.

PRICE: Disk 90.00

TITLE: CHECK-MATE
PUBLISHED BY: THE COMPUTER EMPORIUM

Checkbook headaches can be a thing of the past with Check-Mate. Rapid edit, search, and sort; bank statement reconciliation and an archive system for a year's checks.

PRICE: $59.95

TITLE: DAILY CALENDAR
PUBLISHED BY: DARRELLS APPLESOFT

The program enters, changes, deletes, searches and reports on the following fields:
Item Number-five alphanumeric characters used as a key record number of ID.
Date-six alphanumeric characters.
Time-five alphanumeric characters.
Subject-twenty alphanumeric characters.
Result-twenty alphanumeric characters.
Contact-fifteen alphanumeric characters.
Generic searches are made on one field at a time and lists the findings on a report or one at a time on your monitor. For example, if we were to search the date field for month 07, then it would list all dates that had the first two digits of 07 provided the dates were entered as MMDDYY. Another example would be to select all dates that "MR. JONES" was contacted. A search of the contact field would be made for "MR. JONES".

PRICE: 30.00

TITLE: DENTAL OFFICE MANAGEMENT
PUBLISHED BY: CHARLES MANN & ASSOCIATES

The "Dental Office Management" package provides for appointment scheduling, patient checkup follow-up, private patient billing and insurance form preparation. The system maintains the patient's general information files, schedules all appointments, prints daily work schedules, keeps track of all daily payments and charges, prepares daily activity summaries, prepares and prints private patient bills, and prepares insurance claim forms.
The appointment system allows the registration of patients onto the system, enters appointments, searches for appointments already scheduled, enters appointment changes, blocks time for vacations and other professional activity and prepares the daily work schedule calendar. The system allows the scanning of future and past appointments to locate patients who need to come in for a checkup and will prepare an address label for use in mailing reminders. The system is so flexible it can locate a patient needing a checkup after an arranged checkup has been cancelled or missed. The system will prepare mail out reminders, notices of appointment changes, or notice of a prearranged or "proposed" apointment. The system also prepares such things as file labels for use on dental records or x-ray folders.
The billing element includes a daily transactions journal which reports all transactions by patient as well as such management information as revenue by procedure and per time period. The system records all services provided, all payments received, any credits made and all account adjustments such as charge write offs. The system will operate in a "private" only or a "private and third party" office. The system prints all bills and insurance claim forms and prints a monthly aged summary of account activity.
The system is designed for operation by the receptionist and/or accounts secretary. The system is menu driven with its own on-board assistance element to make training easy. The system has an automatic "remodel" element for program changes to meet individual office or hardware requirements. No programming knowledge is required to make program modifications.

PRICE: $359.95

TITLE: DENTISTAID™
PUBLISHED BY: MICRO COMPUTER MANAGEMENT, INC.

APPLE II — The same as the Z-80 based software with a few modifications. Must be used with the Microsoft Z-80 Softcard and an 80 column video display card. This menu oriented program provides complete practice control by performing the following functions:

ENTER/DELETE PATIENT RECORD

This program is used to enter and delete names, addresses, home and business telephone numbers. Before filing new names, the system checks for duplicates. Account numbers are assigned by the computer in numeric order.

PRINT INDIVIDUAL STATEMENT/INSURANCE FORM

This program is used for printing insurance forms for an existing account, individual or family prequalification and/or actual services.

RECORD VISIT INFORMATION

This program is used to record information pertinent to work done on each account, i.e., tooth number or letter, surface, description of work performed, and fees charged, This information can be pre-programming in the system for fast data entry.

PRINT ACCOUNTS RECEIVABLE/AGING REPORT

This program is used to print out the patient outstanding account balance, aged current, 30, 60, 90 days. Information includes: name, address, work phone, home phone, no payment made this month, whether balance is in 90 days, totals for each disk, and grand total.

PRINT SUMMARY/PRODUCTION REPORT

This program is used for summarizing all fees charged and payments received during the current day. All work descriptions are itemized by account number and include: tooth number of letter, surface, description of service ADA procedure number, and fee charged.

Payments received are also itemized by patient account number and include: account number, account name, and amount received.

Payments received are also totaled weekly, monthly and yearly and can be reset individually by the operator. The system gives the dentist at-a-glance totals of items.

Production analysis is also incorporated in this summary to provide the dentists with an up-to-date analysis of all work that has been performed under each standard ADA production type.

PRINT MONTHLY STATEMENTS

This program will print statements of account on MCM Speedimailer Statement Forms, designed to eliminate stuffing, addressing and sealing of envelopes. Statements can be printed under two different selections: A) Printing a single statement and clearing visit information after printing. This option is used for accounts that may not get an automatic monthly statement, and/or the operator needs a statement of account at a time different from the monthly statement date. B) Printing for all accounts, add finance charges and age all accounts. This selection allows printing of all statements for accounts with an outstanding balance and/or accounts with zero balance and have had work performed during the billing period. This program will also allow cycle billing by selecting account number to start billing from.

PRINT RECALLS

This program is used to print recall notices on standard Moore Business Form speedmailers for mailing to patients, and/or if printed on plain paper used to do telephone recall follow-up.

The recall notices will be printed for all accounts up to and including the date entered by the operator.

RECORD PAYMENT

This program is used to receive payments. Payments received are posted to the appropriate patient account. The total payment amount will be shown on the patient's aging report, display and monthly statement.

DISPLAY PATIENT RECORD

This program is used to display all pertinent patient account information, i.e., name, address, home and work phone numbers, account aging, payments received, date of last account activity, recalls for each family member, and visit information for the current billing period.

Displaying of this pertinent account information is useful in many situations that occur in the dental office, i.e., telephone account balance inquiry, telephone number look up, payment inquiry, etc.

RECORD RECALL INFORMATION

This program is used for adding patient recall dates to patient accounts. Recall dates can be entered into the system for up to twelve family members.

PRINT ALPHABETICAL LISTING AND ACCOUNT NAMES

This program will give a list of a major patient account names with the associated account number, which is very useful in accessing the correct patient account when only the name is known.

CHANGE NAMES, ADDRESSES, OR PHONE NUMBERS

This program is used to change pertinent patient account data, that might have changed due to postal regulations, moving to a new address, or change of name.

A major advantage of DENTISTAID is simplicity of operation used to increase office efficiency through automatic generation of many forms and reports that give the dentist better practice control.

PRICE: $1000.00

TITLE:DESKTOP/PLAN - A PROGRAMMING LANGUAGE FOR ANALYSIS
PUBLISHED BY: DESKTOP COMPUTERS

Everyone talks about financial analysis on a desktop computer. Desktop/Plan is the software tool that makes it practical to develop your own customized ... Strategic Plan Analysis, Budget Planning System, Captial Budget Planning, Cashflow Planning, Product Pricing Analysis, Job Development Estimating, Job Cost Estimating, Profit & Loss Projections, Manpower Requirements Planning, Salary/Labor Cost Planning, Balance Sheet Projections, Financial Report Preparation, Make/Buy Analysis, Sales Forecasting without programming at a low one time cost.

Features: Reports, results of calculations may be reviewed before printing, 1 to 18 columns/time periods, multiple report formats, multiple copies, selective printing of model results.

Standard calculations provided; data generation, line arithmetic, column arithmetic, user developed routines may be incorporated.

Consolidation; multi-location sub-models easily summarized, multi-division/department submodel transfers to master model.

Model changes; data, report formats, calculations easily entered to model.

Model File Backup.

Benefits:

Cost. Low cost mass produced software, operates on very low priced hardware, no continuing time/rental costs.

Sectory of Planning Information. Planning data stored on diskettes remains in possession of planner. "Outsiders" such as DP professionals need not be involved.

Ease of use. No prior computer knowledge required. Total interactive. Functions selected from "menu". User "prompted" for planning date, report format & test, calculation requirements.

PRICE: $100.00

TITLE: DISK-O-CHECK™
PUBLISHED BY: HIGH TECH

DESCRIPTION: DISK-O-CHECK™ provides you with the capability of recording all your checks and deposits on diskette where they can be easily accessed.

DISK-O-CHECK™ also provides you with reports which give you the information you need to budget your finances effectively. It could even be used as a household or small business ledger.

FEATURES: EASY TO USE!

Over 2000 checks can be stored on a diskette.

Multiple checking accounts are supported.

Prints out your check register.

Reconciles your checkbook to your bank statement and prints a list of all checks outstanding.

Allows you to quickly find and correct any check you have already entered.

Summarizes checks by expense category. You may categorize your checks by expense category and, at your request, DISK-O-CHECK™ will provide you with a detailed report summarizing all the checks and the total amount spent for each separate category. This means that you can receive a report summarizing all checks written for gasoline, car maintenance, food bills, etc.

PRICE: 100.00

TITLE: DISPATCH
PUBLISHED BY: COMPUTER DISTRIBUTOR

A management tool for any business that has people or vehicles in the field and needs to keep track of their location, movement, and status. Ideal for police, fire departments, burglar alarm companies, ambulance services, TV stations with crews in the field, building contractors, home repair services, etc. Program will monitor up to 24 cars (or people); each is handled by the Apple as one field, and all information for that person is displayed on the screen at one time (location, status, etc). Each file can be updated as more current information is received. The type of call a car/person is on is user designated. Program senses disk-full. A print-out of all activity is available on command.

PRICE: Disk, $500.00

TITLE: ELECTRONIC INDEX-CARD FILE
PUBLISHED BY: SOFTAPE

The electronic Index-Card File is an Apple II computer program which uses the Apple Disk for sorting and retrieving information such as telephone numbers, recipes, etc. The information is sorted in alphabetical order on "index cards" each of which is 40 columns wide by up to 12 lines long. The program is written in Integer BASIC, is very powerful and is easy to use. The program will be distributed on cassette. The INSTRUCTION BOOK will explain about the use of this program. Instead of using actual 3 x 5 paper index cards, the ELECTRONIC INDEX CARD FILE USES THE APPLE DISK to store the information in magnetic form. Your index cards are kept in alphabetical order and finding or changing information is just seconds away.
PRICE: 19.95

TITLE: ELECTRONIC PRICE SHEET
PUBLISHED BY: BRODERBUND SOFTWARE

This sales tool for retailers configures customers' purchases on screen while they watch. Displays product lines and prices and computes discounts. Prints customized price quotes. Maintains up to 50 product lines with 99 items per product line. East to use. By Scot Kamins. Apple II, with APPLESOFT, 48K.
PRICE: $100 Disk

TITLE: EXECUTIVE MANAGEMENT OVERVIEW
PUBLISHED BY: CHARLES MANN

The program is designed for the company President or General Manager. It uses the graphics mode to display the trends in sales, total costs, approved inventory levels, and profits over the latest 25 months (or quarters). The historic data is stored within the program and as soon as the latest data is available a complete plot is generated by four simple inputs. The program includes a "sample run" so the program can be visualized immediately and the sample trends analyzed. The program plots four periods at a cycle to allow user to visualize movement in perspective. Sales, costs, inventory and profit plot themselves separately and in colors keyed to legend.
PRICE: DISK, 54.95

TITLE: FILE CAPACITY
PUBLISHED BY: HIGH TECHNOLOGY, INC.

"C.B.S." was written to assist the small businessman in the tracking and billing of clients' transactions. It is a flexible system. It can be used by those who need to have 10 (or less) hourly rates or by those who have use for as many as 500. There are 2 major files used by the system: the RATES file which holds the hourly rates for each employee, and the TRANSACTIONS file which holds all client transactions. The maximum number of rates that can be entered into the RATES file is 500.
Depending upon the structure of your business, you may be able to enter up to 900 transactions in one billing period. Below is the formula you wil need to use to determine the maximum capacity of the TRANSACTIONS file for your particular business:

R = the number of rates you decide to store in the RATES file (from 1 - 500)
P = the maximum # of individual projects 'active' during any one billing period. (A project is 'active' if it carries a non-zero balance.)
M = the maximum # of transactions you will ever need to enter for any one individual project.

Once you have determined what you think are valid figures for R, P, and M for your business, fill the figures into this formula:

$$S = \frac{R \times 41 + P \times 158 + M \times 100}{100}$$

If you have *one* disk drive only:
Subtract S from 400 to arrive at the maximum number of transactions you may enter during one billing period.
If you have *two* disk drives:
If S is less than 400, you may enter up to 900 transactions during one billing period. If S is more than 400, then this sytem will not meet your needs.
48K.

TITLE: FINANCE
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

A selection of useful commonly used financial formulas. 8-32K.
PRICE: $12.95

TITLE: FINANCE AND INVESTMENT
PUBLISHED BY: INSTANT SOFTWARE

Attention all would-be millionaires. Now, keep track of your investments by harnessing the power of your Apple II (or Apple II Plus) with the speed of floppy disk storage. The Finance and Investment package has been fashioned to help you, the businessman, to solve some of those time-consuming tasks you face daily. The programs included are:
LOAN AMORTIZATION SCHEDULE — This program will calculate a complete monthly breakdown of any loan or investment. All you do is enter the amount of the principal, the interest rate, the term of the loan or investment and the number of payments per year. You'll see a month-by-month list of the principal, interest, total amount paid and the remaining balance. Any of the amounts can be listed on a paid-to-date basis, at your option.
DEPRECIATION SCHEDULE — It will compute a depreciation schedule using any one of the following methods: Straight Line, Sum of Years-Digits, Declining Balance, Units of Production or Machine Hours. Just enter data in response to the computer's prompts and you'll see a list of how long the item has been or will be in use, the annual depreciation, the accumulated depreciation and the remaining book value.
MORTGAGE WITH PREPAYMENT — Use this program to develop a prepayment plan that will provide optimum savings on the cost of the mortgage, reduce the terms of the mortgage and help avoid overtaxing your income in the process. It will calculate the cost of the original mortgage, as well as the cost and savings on a mortgage with annual prepayments. If you must borrow money to make the prepayments, the computer takes the added interest into consideration.
FINANCIER — This program is designed to take the extensive paperwork out of your daily financial planning. It performs ten common financial calculations that can help you: (1) design optimum investment schedules; (2) check on depreciaiton rates, amounts and resale values; and (3) let you know exactly what a given loan is going to cost in terms of time and money.
PRICE $19.95

TITLE: FINANCIAL
PUBLISHED BY: COMPUTER HOUSE DIV.

This is really a group pf programs to compute many financial routines. Routines includes: amortization, loan payment & total interest, last payment, principal, % of interest, remaining balance, term of loan, interest from an investment, future value of an investment, internal rate of return cash flow analysis before and after taxes, installment sale analysis and record of investments.
Note: Record of investments covers over 700 stocks, bonds, bank accounts, etc.

PRICE: $175.00

TITLE: FINANCIAL PACKAGE
PUBLISHED BY:REAL ESTATE MICROCOMPUTER SYSTEMS, INC.

The Financial Package includes four programs (with manuals):
AMORTIZATION TABLE
DEPRECIATION SCHEDULE
INTERNAL RATE OF RETURN/FINANCIAL MANAGERS RATE OF RETURN
WRAP-AROUND LOAN ANALYSIS

I. AMORTIZATION TABLE

This program calculates monthly and annual amortization schedules for loans, leases, or other series of amortized payments. A choice of beginning-of-month or end-of-month payments is allowed. Output may be video or printed.

II. DEPRECIATION

This program calculates a depreciation schedule based upon straight-line, sum-of-years' digits, declining-balance, or component depreciation. The maximum amount to be depreciated is $99.9 million. The maximum schedule is 60 years. Input and output data are rounded to the nearest dollar.
The user specifies the date of purchase, the amount to be depreciated, the expected life of the asset, bonus depreciation (if taken), the salvage value amount (if salvage exists), and the type of schedule desired. Output may be viewed on the video screen or a printed report may be created. As with other programs, data entries may be changed at any time.
Component depreciation allows up to 20 items and each may use whatever method is appropriate as well as different depreciable lives and salvage values.

III. INTERNAL RATE OF RETURN AND FINANCIAL MANAGERS RATE OF RETURN

This program calculates the INTERNAL RATE OF RETURN and the FINANCIAL MANAGERS RATE OF RETURN from a series of annual cash flows. Up to 32 cash flows may be entered. Individual cash flows may be as large as $99.9 million. The program allows input date to be reviewed and changed at any time. The INTERNAL RATE OF RETURN is calculated automatically. In order for the FINANCIAL MANAGERS RATE OF RETURN to be calculated a SAFE RATE and a REINVESTMENT RATE must be specified. Results are displayed on the video screen and may be printed in report form.

IV. WRAP-AROUND LOAN ANALYSIS

This program calculates the annual rate of return on a loan that is "wrapped around" an existing loan. Such loans are known as wrap-around mortgages, contracts for deeds, or inclusive deeds of trust. The program allows complete flexibility as to interest rates, compounding periods, and other loan terms.
A payoff date prior to the maturity of either loan may be set. The computer will then calculate principal repayment requirements for both loans. Loan conditions may easily be changed to allow creation of a wrap-around financing having a specified yield. Annual loan payments for the underlying loan and the wrap are calculated and displayed. Output may be on the video screen or a report may be created which shows all loan characteristics, the yield on the wrap, and annual cash flows.

TITLE: FINANCIAL MANAGEMENT SYSTEM(FMS)
PUBLISHED BY: DARRELL'S APPLESOFT
MEMORY: 48K, APPLESOFT ROM
HARDWARE: 2 DISKS
40-COLUMN PRINTER (opt.)
132-COLUMN PRINTER

FINANCIAL MANAGEMENT SYSTEM (FMS), is a totally integrated business system designed for the small businessman. FMS will fill the businessman's needs with a speed comparable to many of the larger computer systems. The speed of FMS is achieved through the use of a "firmware card" named KSAM (for Keyed Sequential Access Method) that plugs into one of the I/O ports of the Apple computer. A typical example is the retrieval of one record of a 16,200 part inventory on a Corvus 10 Megabyte Hard Disk in less than 5 seconds.

"The System" is comprised of five modules. These are: 1. Accounts Receivables, 2. Accounts Payables, 3. Inventory Control, 4. General Ledger and 5. Payroll. Each module will function alone or in conjunction with one or more of the other modules.

Recommedations toward the acquisition of a suitable printer (a necessity) are limited to its being capable of producing a 132 column printout. FMS allows the use of either a parallel or serially interfaced printer.

Careful consideration has been given to the needs of the small business in the number of records that may be stored by the system. To accommodate the large variety of businesses desiring to use the system, FMS is available for use on three mediums. Most popular is the five and one quarter inch mini-floppies, but FMS is also available for eight inch drives and the Corvus 10 megabyte hard disk.

Choice of the used medium is determined by the needed file sizes. Capacities of the three version are:

Disk	Size	Custmer	Invoices	Invent.*	Vendors	Payables	Empl.*
Apple	5"	400	400	1,000	400	400	100
Lobo	8"	1,000	1,000	2,400	400	400	(1)
Corvus	10 meg.	5,200	1,000	18,000	400	400	(1)

(1) Payroll employee information is presently being re-evaluated.
(*) These files may be increased by adding diskettes.

Standard FMS systems use the "Mountain Hardware Clock" as a user defined option.

OPERATION

FMS was designed with the operator in mind. All functions originate from easily understood menus (screen displayes) and information is entered in response to programmed questions. The various modules are password protected giving further security to today's business, already besieged by unauthorized prying from many sources.

Direct entry into each of the modules is accomplished in the File Maintainence function (common to all modules). The file maintainence menu offers several functions common to many of the modules. These functions entail adding/deleting and changing a record, determination of the file size, and the search and list features. Listing the files allows the user to see every record individually on the screen or in printed form. The search mode permits a detailed examination of one or more records selected by one of many of the

fields in that record. In most instances, retrieval of a particular record may be achieved in under two seconds when requested by key number.
Features include:

INVENTORY MODULE
Point of Sale using 40 column sales slip or optional invoice writer
Cash or charge sales accommodated
Merchandise returns (credit memos) entry
Receivables created in the point of sale automatically posted to accounts receivables file and customer file updated
Inventory Control Recorder Report
Easy re-entry of parts received with the Parts Received Report
Module accounting automatically posted to the General Journal

ACCOUNTS RECEIVABLE MODULE
Automatic carry-over of clients terms in the point of sale routine
Reuse of invoice and customer numbers after deletion
Automatically updated "Current Amount Owing" and "Total Business Transacted" in the Customer Record File
Programmed interest application to late (overdue) accounts
Allows the granting of discounts in the terms field
Receipt of payment by either customer or invoice number
Monthly statements printed on forms offered by a national forms company
Past due report (aging schedule)
Module accounting automatically posted to General Journal

ACCOUNTS PAYABLE MODULE
Allows the use of discounts earned by date and percent
Permits payment by vendor, invoice number, or both determined by a dollar amount
Permits withholding payment on a particular invoice
Generates checks on an inexpensive and readily accessible form
Allows the crediting of payables to specific ledger accounts
Module accounting automatically posted to General Journal

PAYROLL MODULE
Each function in the module is password protected
User entered tax tables from standard forms
Maintains employee records as long as required
Each employee record keeps current, quarterly and year to date totals
Produces check with detailed comprehensive stub
Generates W-2s on standard forms

GENERAL LEDGER MODULE
Chart of Accounts will accommodate 250 account numbers
Maintains current, year one, and year two balances
All transactions written to General Journal for complete security and audit trial
Automatic entries from various modules referenced to program and activity
Easy entry into General Journal
Maintains current month and year-to-date detail
May be updated as desired
Comprehensive ledger report
Income Statement and Balance Sheet include precentages with current month and year to date totals

OPTIONAL MODULES
Because of the basic module design of FMS, the user can determine and package the business system to fit his/her specific needs. Darrells' Appleware has an on-going program development policy to meet the needs of the end user. New modules are constantly being created to further this end.

LAYAWAY
For those retail stores needing a constant accounting of all layaway purchases, we have designed this program. It allows up to twelve (12) regular payments per individual purchase.

ORDER ENTRY PROCESSING
Referred to by some as "Purchase Order Processing", in order entry serves those needing a "back-order" capability. In short, upon entering your client's purchase order it subtracts merchandise from your inventory and creates a "Critical File" for merchandise not deliverable. The purchase order is held in abeyance until it is relieved by being filled or canceled. This module produces a standard invoice designed to fit an easily accessable "off the shelf" form from a national company.

JOB COSTING
Job Costing is tied to both the Payables and Payroll Modules. It provides the acquisition of necessary information to maintain current cost accounting of a variety of functions within a company. Cost overruns and related problems can be detected at a glance.

UNIVERSAL DATABASE
A strong user defined database using the FMS firmware (KSAM), this program allows the definition of up to 40 fields. The fields can be alphanumeric (letters and numbers) or numeric (only numbers) and contain up to 25 letters or digits. KSAM provides the same speed and power offered by FMS in a form determined by the user.

FMS (five basic modules)	$ 950.00
FMS (8' version - upon completion)	$1050.00
FMS (Corvus version - upon availability)	$1200.00
ACCOUNTS RECEIVABLE (stand alone)	$ 225.00
ACCOUNTS PAYABLE (stand alone)	$ 225.00
GENERAL LEDGER (stand alone)	$ 225.00
INVENTORY (stand alone)	$ 225.00
PAYROLL (stand alone)	$ 225.00

OPTIONAL MODULES

DATABASE (with another module)	$ 90.00
DATABASE (stand alone)	$ 225.00
LAYAWAY (with system)*	$ 90.00
ORDER ENTRY PROCESSING (only with inventory and accounts receivable)*	$ 225.00
JOB COSTING (with accounts payable/payroll)	$ 225.00
UPDATES (minimum non discountable)	$ 25.00

*-not available as a stand alone module
1-presently stand alone ... will be connected to accounts payable/payroll

TITLE: GAP-AR
PUBLISHED BY: PROFESSIONAL DATA SYSTEMS

Requires GAP-GL to run, allows adding A/R invoices, printing Sales Journal, detail A/R report, Acct. Aging, add/update Cash Receipts with register, Cash Receipts Journal, and A/R Billing.
PRICE: $99.95

TITLE: GAP-AP
PUBLISHED BY: PROFESSIONAL DATA SYSTEMS

Requires GAP-GL to run, allows adding of A/P invoices, printing Purchase Journal, detail A/P report, Aging of Accounts, Check Writing, Check Printing, Cash Disbursements Journal.
PRICE: $99.95

TITLE: GAP-GL
PUBLISHED BY: PROFESSIONAL DATA SYSTEMS

Includes all basic GAP functions, plus entry of General Ledger transactions, prints General Journal, General Ledger summary and detail, Balance Sheet, Profit and Loss.
PRICE: $124.95

TITLE: GENERAL ACCOUNTING PACKAGE
PUBLISHED BY: PROFESSIONAL DATA SYSTEMS

This is a proven double entry accounting system with user definable accounts. The account numbers are made up of 7 4-digit fields allowing 7 levels of account classifications. With the use of the OPERATOR REPORT SELECTOR GENERATOR (ORSG), you can generate any type of report you desire, or use report programs in GAP-GL, GAP-AP, and GAP-AR.
PRICE: $299.95

TITLE: GENERAL ACCOUNTING SYSTEM™/BPI
PUBLISHED BY: SOLUTIONS, INC.

The Standard for Small Business Accounting
GENERAL LEDGER SYSTEM
Balance Sheet, Profit & Loss Statement, Cash Disbursements Journal (Check Register), Sales Journal (Invoice Register), Cash Receipts Journal, Merchandise Purchased Journal, Cash Sales Journal, General Journal, Accounts Receivable Ledger, Accounts Payable Ledger, Payroll Ledger.
ACCOUNTS RECEIVABLE SYSTEM
Open Item or Balance Forward, Complete Account Aging, Life-to-Date Customer History, Complete Account Analysis (Up to 16 Reports), Itemized Statement Printing, Customer Mailing List Generation, 500 Prompted Customers per Diskette (No limit to number of diskettes) 1000 Transactions per Period, Skeleton General Ledger Prepared, Automatic Posting to BPI General Ledger.
INVENTORY/ORDER ENTRY
FIFO, LIFO, Averaging, 900 - 2000 Line Items, Instant Inventory Query, Automatic Back-Order Handling, Automatic Re-order Levels, Inventory Turn Analysis, Point-of-Sale Operation, Price Tag Printing, Inventory Profit & Loss Statement, Purchase Order Generation, Non-Inventory Item Handling, Always in Balance with General Ledger, Automatic Posting to Regular BPI Ledger.
Designed and developed by BPI Systems. A unique combination of Accounting, Business and Programming expertise dedicated to making the BPI GENERAL

ACCOUNTING SYSTEM the finest system in use throughout the world.
Why do we claim the BPI SYSTEM to be the STANDARD for SMALL BUSINESS ACCOUNTING?
Because it was designed BY BUSINESS and ACCOUNTING PROFESSIONALS — not programmers.
It lets a business run the way it DOES — not the way a group of programmers THINKS it should.
Why is it the MOST POPULAR Small Business Accounting System on the market today?
Because it is FAST, EASY TO USE, FULLY INTEGRATED, DESIGNED FOR THE FIRST-TIME USER and SUPPORTED and SUPPORTED.
SUPPORTED by BPI SYSTEMS and SUPPORTED by SOLUTIONS, INC.
SUPPORTED by BPI SYSTEMS to assure you THE SYSTEM will be IMPROVED and EXPANDED to give you SATISFIED CUSTOMERS and AFTERMARKET SALES.
SUPPORTED by SOLUTIONS, INC. to assure you of fast update materials, the latest information and a PROFESSIONAL approach to APPLICATION Marketing and Distribution.
Features:
Chart of Accounts — over 500.
Up to Ten separate profit centers, each with a complete set of financial statements — PLUS a set of consolidated statements.
Accounts Payable — over 200 PROMPTED payees.
Accounts Receivable — over 500 PROMPTED customers per diskette. 1000 transactions per period. Up to 16 REPORTS for ACCOUNT ANALYSIS.
Inventory — from 900 to 2000 line items.
All sections may be used independently.
Designed for APPLE, BELL & HOWELL and COMMODORE microcomputers.
THOUSANDS IN USE today by BUSINESSES, C.P.A.'s and BOOKKEEPERS.

TITLE: THE CONTROLLER (GBSI)
PUBLISHED BY: APPLE

The Controller gives a business control of its revenues and expenses through General Ledger, Accounts Payable, and Accounts Receivable computer software. The Controller is designed for a non-technical manager or clerk. It handles accrual bookkeeping and can easily maintan the ledger, customer, and vendor accounts of many small businesses. The Controller provides better control of cash flow, reduces paperwork, eliminates last-minute "catch-up" accounting, prints checks and monthly account statements, and provides information in concise summary reports that allow a manager to make better decisions.
The Controller has been designed with fail safe operation in mind. Its unique data entry system signal typing errors with an audible warning. It automatically makes copies of data files for historical purposes, in case of loss of the originals. And it automatically prints reports before the system will allow the user to close out the monthly books.
The Controller Business System consists of three program modules:
The GENERAL LEDGER module maintains a file of up to 250 types of journal accounts with up to $90 million in any one account. Up to 7500 journal entries can be made per month, and a unique feature allows customer and vendor account transactions to be created and posted to the general ledger automatically, without redundant typing. The system produced detailed, easy to read management summaries of journal accounts, revenues, and expenses; as well as balance sheets and income statements.
The ACCOUNTS RECEIVABLE module maintains up to 250 customer files per data diskette (up to 3 diskettes can be used). Each diskette can handle 750 sale and payment transactions per month, and the balance-forward system

automatically summarizes transactions into account aging periods at month end. Individual transactions can be for up to $90,000 each. The system produces a detailed summary of receivables, organized by the number of days each bill has been outstanding (aged trial balance). Monthly account statements are printed automatically for customer billing purposes, with optional finance charges added to overdue accounts. The system also produces mailing labels, customer lists, and sales commission reports by salesmen.
The ACCOUNTS PAYABLE module maintains a file of 100 vendors and allows 300 invoices for up to $1 million each, or $90 million cummulative. Payables are organized by due date, so that in planning cash flow a business can customize bill paying to take advantage of discounts and varying net terms. Checks are printed automatically, along with summaries of case requirements by due date and vendor. The system prints summaries of check paid, new accounts, and a list of vendors.
THE CONTROLLER is packaged in an attractive 3-ring binder with a manual and diskettes.

PRICE: DISK, 625.00

TITLE: GENERAL BUSINESS ACCOUNTING PACKAGES
PUBLISHED BY: PEACHTREE SOFTWARE

A fifth generation of Accounting and Inventory Mangagement packages, from the world's leading supplier of microcomputer business software.
Since their introduction, the Peachtree Software(TM) Accounting and Inventory packages have become the standard of the industry. Literally thousands of these packages have been distributed through over 200 authorized Peachtree Dealers and OEMs worldwide.
The Peachtree/5 versions of these packages incorporate the latest features and improvements, including:
Password protection for data and program security.
Better data entry and editing control through screen management.
Expanded capacities and increased speed to take advantage of more powerful hardware systems.
Thorough audit trails through improved control reports and total cross-checking.
Additional management reports and report options.
Comprehensive documentation including a new INSTALLATION GUIDE for each package.
Executes under Microsoft's latest BASIC version 5.0 in both an interpretive and in a compiled mode.
Specific package improvements include:
A new Payroll design which incorporates the latest government requirements, tip reporting, and advanced deduction techniques.
Comprehensive Accounts Receivable modifications to allow integration and reporting of sales by department to General Ledger; also, invoice spooling, tax reporting, and sales analysis.
Redesigned Inventory Management report and file information to yield complete, accurate costing and pricing information.
For further information, visit your local Dealer, who will be glad to demonstrate the software, generate sample reports, and allow you to examine in detail the users guide.

TITLE: GENERAL LEDGER
PUBLISHED BY: A.V.E.

Stores full sales and expense information on the Apple Disk. Searches are allowed on numerous fields on both sales and expenses. Monthly statement generation and expense, sales and general summaries are available.
PRICE: Diskette 60.00

TITLE: GENERAL LEDGER
PUBLISHED BY: CONTINENTAL SOFTWARE

We challenge the competition with the first revolutionary general ledger program for the Apple that your accountant will like as much as you will.
Complete step-by-step instructions.
Automatic double-entry. Complete audit trails. Menu Driven. Easiest to use by far. Hi-Res charting of all accounts. Maintains Complete Year's history of all transactions. Escellent error-checking.
PRICE: $175, Complete Program $15, Manual only

TITLE: GENERAL LEDGER
PUBLISHED BY: COMPUTER HOUSE DIV.

Holds up to 300 accounts, up to 3000 transactions per month, cash disbursements, cash receipts and petty cash journals. Maintains account balances for present month, present quarter, present year, three previous quarters and previous year. Accepts postings from A/P & A/R. Complete financial reports including trial balance, balance sheet and profit & loss statement.
PRICE: $295.00

TITLE: GENERAL LEDGER
PUBLISHED BY: COMPUMAX

MICROLEDGER performs the duties of bookkeeping and the matching of revenues and expenses.
LEDGER 1 - builds and maintains your CHART OF ACCOUNTS Master file. This file also holds current and accumulated totals in each account.
LEDGER 2 - Sets up and updates JOURNAL Transaction file.
LEDGER 3 - Lists both JOURNAL and CHART of ACCOUNTS files.
LEDGER 4 - Does TRIAL BALANCE and POSTING. It outputs and AUDIT TRIAL of all transactions.
LEDGER 5 - Produces PROFIT and LOSS STATEMENT.
LEDGER 6 - Produces BALANCE SHEET, Assets, Liabilities and owners equities are shown by account and by totals.
Aged Trial Balances (under 30 days, 31-60 days, 61-90 days, over 91 days).
Receivable by customer. You have the option to request report for a single customer or for all customers.
Receivables by date. In this program, you can ask for a statement covering a single date or a range of dates. The statements will also produce the corresponding cash projections.
Finally, the journalizing option will create the journal file entries that correspond to each A/R as it is entered, as well as to the receipt of each customer payment as it is input.
These transactions will ripple through your trial balance, posting, profit and loss statement and balance sheet - if you are a user of MICROLEDGER.
PRICE: 140.00

TITLE: GENERAL LEDGER PACKAGE
PUBLISHED BY: SMALL BUSINESS COMPUTER SYSTEMS (SBCS)

It features:
6 digit account numbers.
31 character account name.
Ten levels of subtotals-giving you a more detailed income statement and balance sheet.
Departmentalizing ... up to nine departments.
Flexibility - adaptable to a printer and either cash or accrual accounting methods.
Cash Journal allows a 33 character transaction description and automatically generates the appropriate offsetting entry.
You can print the balance sheet and income statement for the current month, current quarter, or any of the previous three quarters. This year's or last year's totals are also included on the income statement. Or a special report that lists the current account balance for selected accounts.
Higher number of entries from an external source - as many as 1,000 per session. No limit on entries - giving you the opportunity to make your entries as many times or as often as you want.
With hgih speed printer routines and other features of our conversion, processing performance does not decrease dramatically at the system limits. Look at these examples of times required to update the chart and print the audit trial.
With 133 item chart of accounts, 700 postings into 70 accounts: less then 20 minutes.
With 133 item chart of accounts, 1000 postings into 70 regular accounts: less than 30 minutes.
With 210 item chart of accounts, 1000 postings into 125 regular accounts: less than 40 minutes.
Coming early this year - capability to archive up to 2500 postings. The chart of accounts will also be archived to maintain the opening balance for the archive period.
In the final analysis, your financial statements are what this General Ledger is all about. And with this General Ledger Package you can format your own balance sheet and income statement. As well, department financial statements may be formatted differently. You have complete freedom to place titles and headings where you want them, skip lines or pages between accounts and generate subtotals and totals throughout the reports-up to ten levels if you need them.
Accounts Payable/Receivable are also available.

	5 inch disc	8 inch disc
Vendors or Customers	700	1,800
Payable Transactions	350	750
Payable Invoices	380	840
Receivable Transactions	600	1,300
Receivable Invoices	600	1,300

Available on Corvus Units Also.

TITLE: INCOME PROPERTY ANALYSIS
PUBLISHED BY: REAL ESTATE MICROCOMPUTER SYSTEMS, INC.

Anlayze investment properties for your client quickly and efficiently.
This program asks for the property operating information, growth rate, depreciation method, and investor tax position. Results for up to 10 years are shown both visually and in printed reports. Program highlights include:
SIMPLE DATA ENTRY - The program asks for all relevant information and allows easy correction or change for simulations.
OPERATING STATEMENT - Income & expense items may be entered as actual dollar amounts or as percents.
LOANS - Four loans of various types (including leases or irregular yearly payments) may be used.
DEPRECIATION - Any composite method allowed. Component may be computed using REMS "Depreciation" program.
OTHER - Tax information, growth rate, and sales costs are also entered.
VISUAL OR PRINTED OUTPUT - The analysis results may be viewed on the CRT screen or printed out in a 4-5 page report.
SIMULATIONS - The property data, financing, etc. may be changed easily for rapid simulation of various projections of growth rates, vacancy factors, or tax position.
DATA STORAGE - The input information may be stored on the program diskette for future use. 60 sets of property information may be stored on a single diskette.
MANUAL - A 42 page manual provides detailed explanation of how to use the program with several examples. The manual can be used as a learning tool for users just getting started in property analysis as well as for experienced investors and counselors.

TITLE: INTEREST COMPUTE
PUBLISHED BY: ANDENT

A versatile collection - business program - will compute varied interest on accounts receivable. Will give screen/printer I/O. Prints bills for medical - small business office. Fast, minimum input.
PRICE: 9.95

TITLE: INTEREST AND LOANS, INVESTMENTS AND RECORD OF INVESTMENTS
PUBLISHED BY: COMPUTER HOUSE DIV.

Routines to Compute: Loan Payment & Total Interest, Last Payment, Principal, % of Interest, Amortization, Remaining Balance, Term of a Loan, Future Value of an Investment, Future Value of Deposits, Withdrawals from an Investment, Interest from an Investment, Initial Amount to Produce Annuity, Deposits to Produce a Lump Sum.

PRICE: $120.00

TITLE: INTERACTIVE BUSINESS MANAGEMENT SYSTEM
PUBLISHED BY: PROG

Designed as a Turn-key system for first-time users the IBMS brings the power of a full-fledged business system into the grasp and budget of a micro-processor based system. Using the Apple II with associated I/O devices the IBMS is designed to allow the user full control over his business accounting, generating everything from the original invoice to the final profit & loss statements.

The IBMS is of an original nature and represents over two years of extensive research into the software and hardware requirements for a small business system. There are currently eleven program modules within the system with more in development, all of which are interactive with the others, giving the user the advantage of multi-usage with a single entry of all data into the system.

Included in the program menu are the following: System Start-Up, Accounts Receivable, Inventory Control, Accounts Payable, Payroll, Fixed Assets, General Ledger, Mailing Labels, Appointments, and the System Sort.

The first of these, System Start-Up, is designed to boot-up upon powering on the system and under normal operation simply allows the user to input the correct data and password for entry into the system. It's usage is also to set up the master index file from which the entire system operates. Upon entry of the proper password for setting up these files the program menu appears with sixteen program slots in which to enter the names of the programs to be used by the system. The second menu following allows entry of the company name and address, etc. as well as tax data and entry "keys". The third menu is for the file status indicators, or record counters. Next comes tax rates and cash data indexed by the system. The following menu allows the user to configure the system to their hardware configuration, and that menu is followed by one allowing several options for payroll and future expansion. Current software configurations allow usage of from two to six mini-floppies, two to four 8" drives, or a hard-disk like the Lobo 10 Megabyte. Standard configuration requires the use of one printer, however, the addition of a possible second has been allowed for.

Program selection is via a selection menu, so as with the entire system, the operator need only a minimum knowledge of the hardware operation.

The Accounts Receivable system, as well as the other units in the system, will allow the user to set up to 32767 accounts into his files. Floppy disk allocation and distribution is accomplished by a simple subroutine which consists of one line for each file in the system and can be changed by the user to customize or optimize his operation and utilization of the available file space.

TITLE: INVENTORY
PUBLISHED BY: DR. DALEY

Supports 2000 items per diskette. Will NOT function with the ESTIMATE package. Each of the 2000 inventory records is user configured to fit the individual options and uses.

PRICE: 99.95

TITLE: INVENTORY:
PUBLISHED BY: COMPUTER HOUSE DIV.

Enter, edit, delete, display and/or print up to 1400 items per diskette. Look up items by name or number. Display six facts about each item; number, name, description-1 description-2, price and quantity. Print out of any item or all items. Print out of all items will extend all prices and compute total inventory value at end of printout for each diskette.

PRICE: $95.00

TITLE: INVENTORY
PUBLISHED BY: CHARLES MANN

This program is designed to operate as a full time monitor of inventory in stock. The program allows data input, updating, correction, sorting and display of inventory items. The system maintains individual item and total stock values (including total stock at retail) and calculates running average unit cost for individual records. The system operates on tape or disk storage depending on media version selected. The search elements include sorting by vendor, description and item number. Vendor record files are included to speed mail or phone re-ordering. The tape version handles up to 200 items. The disk version will handle up to 250 items. Disk version is Applesoft.

PRICE: TAPE, 89.95
DISK, 94.95

TITLE: THE INVENTORY CONTROL SYSTEM STOCKFILE
PUBLISHED BY: SOFTECH

FEATURES:
Large capacity: the system will handle up to 9500 DIFFERENT items, with two-second access.
Menu-driven: all commands are selected from a menu, which is always automatically presented on completion of each command.
Documentation is oriented to users - people who know their business, but may not be familiar with computers. There's both a Tutorial Manual for step-by-step guidance for getting started, and a comprehensive Operator's Guide for operating details.
Exclusively for the APPLE II - uses a fast disk filing method utilizing specially written machine language routines to speed up access (maximum two seconds for any part). We know the APPLE extremely well, and there are no compromises to make the package fit other machines.
Brochures are provided free to dealers with each order. Two copies of our brochure are included with this dealer package.

One demonstration diskette is provided to each dealer. Copies of this diskette may be freely made, and used to demonstrate features of STOCKFILE.
Each STOCKFILE package includes complete documentation, and TWO protected diskettes. Every effort has been made to provide perfect copies, and of course we will replace any diskette that is damaged, whether by misuse or not, for a charge of $10 and the return of the original copy.
A sample inventory system is included, so that the user can see how a typical system operates. Thorough instructions guide the user through the steps necessary to set up STOCKFILE.
Password protection against unauthorized alteration of information is provided. Staff can make inquiries, but may not alter prices, stock totals, and other critical information, unless armed with the management password.
Automatic price averaging (if desired), turnover reports, low inventory signals, and a comprehensive BACKUP/RECOVERY procedure make STOCKFILE the most versatile and powerful business system available for the APPLE.

TITLE: INVENTORY INFORMATION SYSTEM
PUBLISHED BY: VIDEO WORLD

A complete inventory for small business. It accepts 8 fields of inputs, Model #, Manufacturer, Supplier, Cost, Sell price, List price, Quantity on hand. All of these fields may be searched for any quantity or entry. A print out of inventory or customer price list is available. Your inventory print out can be searched for any field, even quantities of 0 to 1 or 1 to 10 or whatever.

PRICE: Disk 90.00

TITLE: INVENTORY MANAGEMENT LIBRARY
PUBLISHED BY: CHARLES MANN

The Inventory Management Library is part of CMA's special library of management tools designed to help decision-makers. The library includes an inventory monitor program for quick estimation of stock levels. The monitor provides data for taxes, stock values, and loss estimation. The inventory estimator element allows inventory value estimation using acceptable retail and gross profit methods. The program has an order point program that tells you when to order to assure stock without added investment. The order quantity estimator helps estimate demand and order quantities necessary for proper stocking. The program is designed for the businessman who wants to maximixe his stock dollar.

PRICE: TAPE, 49.95
DISK, 54.95

TITLE: INVENTORY PAC
PUBLISHED BY: CHARLES MANN

This disk only package includes CMA's powerful disk inventory program and the inventory management library in an integrated program. The package keeps track of 250 items per diskette and supplies powerful management tools for ordering and purchase timing. The system contains all features of these two other CMA programs (including DOS) memory. Disks are Applesoft.

PRICE: DISK, 99.95

TITLE: INVENTORY PROGRAM
PUBLISHED BY: SOFTWARE TECHNOLOGY FOR COMPUTERS

2 disk drives, menu-driven program. Inventory categories include: STOCK #, DESCRIPTION, VENDOR ID, CLASS, LOCATION, REORDER PT., REORDER QTY, QTY ON HAND. All records can be entered, changed, updated, deleted, or viewed. Reports can be sorted in ascending/decending order by any category. There are 7 search reports (3 automatic). Calculates $ VALUE of inventory and YTD, MTD, and period items sold. Accumulates inventory over a 13-month period. Plus much more. Requires a 132-column, serial/parallel printer. Complete turnkey operation with bootstrap diskette. Program diskette and instruction manual.

PRICE: $140.00

TITLE: INVOICE WRITER
PUBLISHED BY: VIDEO WORLD

This program writes customer invoices from your input data one at a time. It is available on the general ledger package to print invoices or to print statements, credits, or shipping lists.

PRICE: Cassette 30.00
Disk 100.00

TITLE: INVOICE/INVENTORY PROGRAM
PUBLISHED BY: CALIFORNIA MICRO PRODUCTS

This program generates an invoice based on operator inputs prompted by the computer. This program can be modified to any invoice size. The program will automatically debit the inventory count for items invoiced and will flag the operator when insufficient inventory is encountered. 32K.

PRICE: $295.00

TITLE: INVOICING PROGRAM
PUBLISHED BY: CHARLES MANN

This program is designed for small firms which bill via an invoice sent to customer concurrently with shipments. The program provides packing slips for all shipments and back order control slips for items not shipped. The program computes item total cost and description. The program computes item total cost and total invoice costs. A discount element is provided to allow percent or absolute dollar discounts to order total. The inoice system is designed to print file documents for statement billing as necessary. The disk versions are in Applesoft.

PRICE: TAPE, 59.95
DISK, 64.95

TITLE: KISS FINANCIAL PROGRAMS
PUBLISHED BY: RE/INTERNATIONAL SYSTEMS CORP.

Choose any five of these valuable programs that are appropriate for your needs:

- Ledger Statements
- Mortgage Acceleration Program
- Estate Valuation Analysis
- Minimum Deposit Illustrations
- Split Dollar Illustrations
- Term/Whole Life Comparison
- Capital Needs Analysis
- Term insurance illustration
- Amortization & Depreciation Schedule
- Financial Goals Analysis
- Ledger Statements — Whole Life
- Mod Whole Life (Deposit Term) Ledger

KISS is available now for immediate inspection and review.

TITLE: LEASE MANAGEMENT PROGRAM
PUBLISHED BY: CALIFORNIA MICRO PRODUCTS

This program was designed as a general purpose lease/rent management program to fit any operation which leases appliances, cars, equipment, etc. The program maintains accounts status over the life of a lease regardless of lease duration and provides for quick access of information for any account. The program runs on an Apple II w/48K of memory, Applesoft, dual disks, and an 80 column printer interfaced through the Communications Interface Card. Three diskettes are provided with the package.

PRICE: $395.00

TITLE: LEDGERPLUS
PUBLISHED BY: MICROSOURCE

A complete General Ledger, Accounts Payable and Accounts Receivable.

ACCOUNTS RECEIVABLE

GENERAL CAPABILITIES

Balance forward without invoicing; aging is current month, 30-60-90, and over 90 days; transaction detail removed monthly after statements are printed and preserved on backup; statements are designed to be mailed in standard windowed envelopes.

SPECIAL FEATURES

Job control forms; complete quick display of an account on screen; operator only has to determine the type of transaction to enter data, all entries are positive dollar amounts; credit status on aging reports assists in establishing customer credit limits; finance charges are selectively applied; statements include detachable return stub, current and post balances with 30-60-90 aging.

DATA CAPACITY

Adaptable from less than 50 accounts and 1800, transactions to 400 accounts and 400 transactions; no limit on number of statements per month; maximum balance up to $99,999,999.99; no limit on number of entries per entry session; multiple data disks may be set up for each company or department.

ACCOUNTS PAYABLE

GENERAL CAPABILITIES

Open item with automatic, manual, partial, deferred and selected payments; invoice vouchers may be distributed to an unlimited number of General Ledger accounts; flexible time-framing to predict cash flow and anticipate discounts; aging is current month, 30-60, 60-90 and over 90 days; checks are designed to be mailed in standard windowed envelopes.

SPECIAL FEATURES
Job control forms; complete quick screen review of accounts and vouchers; rescheduling worksheet; printouts of Transaction Entry Journal create audit trail of voucher rescheduling and adjustments; history listing tracks payment of voucher towards full payment; immediate aging of vouchers based on invoice date.
DATA CAPACITY
Adaptable from less than 50 vouchers and 550 vendors to 300 vendors and 300 vouchers per month; total amount due cannot exceed $99,999,999.99.
GENERAL LEDGER
GENERAL CAPABILITIES
Balance Sheet and Profit/Loss statement can be generated for current and previous months; formatting of financial statements may be determined by the user; keeps account balances for current and previous month.
SPECIAL FEATURES
Adaptable user defined financial statement captions with provisions for subtotal, underline, insert date, vertically space, center captions and headings; error checking routines; current and prior financial statements may be generated at any time.
DATA CAPACITY
Adaptable from less than 50 accounts, 80 financial statement captions and more than 1480 transactions, to more than 280 accounts, 220 financial statement captions and 120 transactions per data disk; unlimited batch entries; eight-digit account numbers; up to 99 subaccounts and 99 departments.
LEDGERPLUS SOLVES PROBLEMS WITHOUT CREATING NEW ONES!
No accounting expertise is required to operate LedgerPlus. It's simple to use. Each LedgerPlus module is self-contained on one program disk and one data disk. NO need to swap disks. Data entry is quick and straightforward. Each module operates independently and provides accurate, printed audit trail of all data entered or changed.
LedgerPlus is fast. No lengthy sorting delays or time consuming operating procedures. And LedgerPlus allows more flexible financial reporting, greater account and transaction capacity. Simply stated, LedgerPlus was designed with the user in mind.
It's just plain better than the rest.
EASE OF USE
Requires no accounting knowledge for data entry; requires no lengthy data sorting; no disk swapping necessary to run each module; additional data disks may be simply created from blank disks; accidental reset or power failure will only affect an account being posted at the time of failure, otherwise no effect.
HARDWARE REQUIRED
Apple II with Applesoft in ROM, or Apple II Plus; 48K RAM, 2 disk drives, Apple serial or parallel I/O card; any serial or parallel 132-col. printer.

TITLE: LEGAL ACCOUNTING
PUBLISHED BY: COMPUTER HOUSE DIV.

This system consists of a bookkeeping program and a trial balance program. Both are user prompting and menu driven. A bookkeeper familiar with legal terms just enters answers to the questions displayed on the CRT. Once the billing information is entered, anyone can display any information desired and/or prepare statements, case histories or a trial balance very quickly. With the proper printer one may produce approximately 450 statements per day. For examples, see illustrations at right. An attorney or group of attorneys using this system can smooth out their accounting, improve cash flow, reduce the accounting time substantially, weed out dead cases, produce printed information very quickly and thereby produce more profit. Usually the system pays itself off in less than ten months.

Summary: Automate legal accounts receivable records. Generate clients statements on time to improve cash flow. Produce informative reports for management's use. All done by a non-computer person.

PRICE: $1200.00

TITLE: LEDGER RECORD SYSTEM
PUBLISHED BY: CHARLES MANN

This program is designed for the small business (or social organization) which needs to prepare simple monthly statements and ledgers of their accounts receivable. The user inputs monthly charges and payments and statements and ledger records are printed. The system will allow almost unlimited entry of monthly invoice totals or other charges to produce account balances for billing. The program prepares total charges and receipts for entry into a general ledger system. The user does not need printed billing forms as the computer statements include all necessary information. Applesoft.

PRICE: TAPE, 59.95
DISK, 69.95

TITLE: LISTINGS
PUBLISHED BY: COMPUTER HOUSE DIV.

Enter, edit, delete, display and/or print property listings (up to 1800 per diskette, any number of diskettes). Listings are set up as follows: residential area #1 to #8, new/sold income, industrial, commercial, farm, business, vacant land, lake, misc. #1 and misc. #2 for the first two data diskettes. Additional diskettes may be used with any category names you wish. Each listing may contain the following information: address, price, features, size, number of bedrooms and/or acres, taxes, previous offer (coded) and listing agent (coded). You may quickly search all listings by category, price (+ or — $5000.00), address or you may look up all listings in a category one at a time in order of entry by taping one key each time. As each listing is shown on the screen all information pertaining to that property will be displayed. If you desire a printout, you can call for only one, all listings in a category or all listings on a diskette. After requesting a printout the computer finishes the task automatically.

PRICE: $265.00

TITLE: MACHINE PART QUOTING
PUBLISHED BY: COMPUTER HOUSE DIV.

This program computes and prints; Time, Operations Cost, Mateiral Cost, Cost per Part, Speed, Feed & Number of Cuts or Passes after you answer the computers questions; e.g. Price Per Pound, Material, Size, Shape, All Finished Dimensions and Tolerances, Kind of Cutting Tool, Hardness, Kinds of Machining Operations, Horsepower, Efficiency and Kind of Machine (Lathe, Turrett Lathe, Vertical or Horizontal Mill, Drill Press, Cut Off Saw/Band Saw).

PRICE: $280.00

TITLE: MANUFACTURING INVENTORY PROGRAM
PUBLISHED BY: RAINBOW

This program will save information on up to 300 stock items. An item may have up to 50 subcomponents. It has the following features:
Lists number in stock and tells if minimum or maximum points have been exceeded.
Tells how many items have been bought and used in the present time period and what they cost.
Keeps track of the inventory value using the average value of an item (this is a compromise of FIFO and LIFO)
Keeps track of up to three outstanding orders per item including quantity on order, date of order, P.O. #/W.O. #, and Vendor/Contractor.
Lists up to three vendors/contractors per item.
Updates subcomponents on an item along with the item.
Calculates total inventory value
Prints out to a printer either a summary for the present time period or a listing of the quantity on hand, status (understocked/overstocked), and number on order for each itme.

PRICE: DISK $79.95

TITLE: MATHEMATICS AS A BUSINESS TOOL (MBT)
PUBLISHED BY: EDUCATIONAL PROGRAMMING

Vol. I white pages: 44 pp.
Vol. II white pages: 90 pp. (approximately)
Courseware:
Teaches managers how to choose appropriate information from their business records and use it to calculate asset valuations, inventory valuation, and interest and annuities, as well as to find important liquidity, activity and profitability ratios. It also allows the user to compare inventory valuation by various methods. Finally, the manager can use these M.S.'s as a facility for calculating, storing, and updating all the above information.
Vol. I - Asset (MA1) and Inventory (MA2) Valuation.
Vol. II - Interest, Annuities (MA3), and Financial Statements and Ratios (MA4).

TITLE: MEDICAL OFFICE MANAGEMENT
PUBLISHED BY: CHARLES MANN & ASSOCIATES

"Medical Office Management" provides the medical office with an easy to use system which maintains patient general information files, the total office's appointment schedule, maintains and prints the daily transactions log, prints procedure by procedure management reports, prepares and prints private patient bills, and prepares insurance claim forms.

The system maintains 10,000 active patients and can schedule up to 19,000 current and future appointments. The system can be expanded to handle multiples of 10,000 active patients in a clinic setting and can provide an appointment horizon as long as 40 months. The system can handle up to about 190 patients per physician a day with up to 250 transactions.

The billing system includes a daily transactions journal or log which includes full reporting by patient by procedure. The daily report includes such management information as revenue per procedure and time spent per procedure. The system also reports daily payments on account, mail payments received, cash in, credit card usage, third party payments received by patient,and bank deposits made. The system puts out bills for patients having a "private only" status and for those having a "private and third party" status. The system allows for monthly (or more frequent) preparation of third party claims forms. The system maintains and bills past due balances and prepares monthly reports suitable for collections follow up. The monthly report reports current, 30-60 day, and 60 + day balances by patient and by insurance carrier.

The system prints appointment labels for appointment cards, appointment reminders and appointment changes. Active elements allow interim printing of patient account status reports, procedure lists, patient charge input forms, carrier outstanding balance reports, patient file folder labels, and daily appointment schedules. The system will prepare copies of such reports as procedures performed for patient medical history files.

The system includes an online HELP function in addition to extensive documentation and operating manuals. The system will "remodel" itself for many different operating conditions and hardware using an exclusive automatic program modification system. The system requires either two or three disk drives, a 130 column printer, and a 48K Apple Computer with either the Language System or Applelsoft in ROM.

PRICE $359.95

TITLE: MEDICAL SECRETARY
PUBLISHED BY: MONUMENT COMPUTER SERVICE

Administrative package for the medical office. The system includes elements for appointment scheduling, patient registration, private patient billing, insurance claim preparation and medical record preparation.

The system allows the medical office secretary to keep track of appintments, make appointment follow ups, print daily schedules, enter and locate patient records, enter charges and payments, prepare daily cash journals, prepare private patient bills, prepare insurance forms, print monthly aged accounts receivable's logs, make collections follow ups, enter and update medical histories and records, and prepare such standard text items as referral letters, and report findings. The flexible system is expandable to handle an unlimited number of patients and includes all functions necessary for appointment scheduling, billing and general word processing.

The system requires one or two Apple II's (or Apple II Plus's) with either two or three disk drives each and a 130 column printer. The system is complete on four diskettes and operating manuals for $500.00. Operating manuals are available separately for $50.00

TITLE: MEDPAC
PUBLISHED BY: SMALL SYSTEM GROUP

Who should consider MEDPAC and the Apple?
The MEDPAC System has been designed for:
Any Physician or group of up to five physicians with an active patient billing load of up to 24 patients. Any office that is finding the volume of paperwork, insurance handlings, patient information record keeping and office accounting (bookkeeping) growing at a rate faster than the staff can manage. Any phyician who is not sure of the practice accounts receivable balance, total number of patients being billed, total number of procedures billing cycle or the total amount of aged accounts receivable (60, 90, 120 days) with an analysis by patient.
WHAT does the MEDPAC System include?
The MEDPAC System provides:
Up to 2400 patient information files that contain all necessary information to handle account billing (both self pay and insurance) and the supplemental information to assist in production of AMA 6/74 (Blue Cross type) insurance claim forms.
Patient inquiry for balances, aged account balances by patient and total, up to 13 major change groups analyzed by code with quantity by code, income for up to five Doctors, alphabetical and numerical cross reference listings of patients.
Full general ledger accounting (P&L, Balance Sheet, Trial Balance and Audit trials).
Hospital patient scheduling system.
Full system diagnostic and backup and a 50 page operating manual.
WHEN will the System be available?
The MEDPAC System has been installed and running for 14 months.
It is available for immediate delivery.
WHY the Apple II computer?
The following were considerations in selecting the Apple:
The Apple Disk provider 116000 characters of storage. After the Disk Operating Systems is removed (10k) the remaining user space is 106K.
The Apple can be operated indefinitely without cooling fans.
The built-in speaker is used extensively to assist operator input (touch typing).
Any video device can be used.
Peripheral devices are interfaced to the computer with all connections made inside the computer. No external expansion device is required.
Hardware requirements are totally dependent on patient activity. (A two disk system will handle from 1 to 800 patients, great for Specialists). Upward expansion is assured. Two hard disk (10 and 70 meg) are being considered to Release 4.0 of the System. Also being planned are mark sense card readers and auto dial/answer modern communications for Insurance Form transmission.

TITLE: MICRO-ACCOUNTS RECEIVABLE
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

The Micro-Accounts Receivable package enables small businesses to bill their customers accurately and on time with a minimum of effort. Each customer is assigned a customer number by the user and whenever data is entered, the system automatically checks for the existence of valid customer numbers and records transactions in the data base. Statements ready for mailing can be produced at any time and provisions for the automatic assessment of finance charges have been included.

TITLE: MICRO-INVENTORY
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

Developed with the particular needs of small businesses in mind, the Micro-Inventory package provides owners of such firms with effective inventory control. Each inventory item is assigned a unique item identifier by the user, and data are stored in logical files. Although the capacity of the system is normally limited to six such files of 200 items each, multiple diskette drives can be used to accommodate additional inventory items. Reports provided include Items on File, Items on Hand, Items on Order, Items at/below Stocking Levels, MTD Sales and YTD Sales. Each report can be generated to include all inventory items or only those specified by the user.

TITLE: MICRO-GENERAL LEDGER
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

Designed with the needs of very small businesses in mind, the Micro-General Ledger allows the user to retain financial control while requiring only a minimal knowledge of accounting. It features a user-defined chart of accounts, interactive data entry and editing routines, extensive error detection devices and automatic end-of-month and end-of-year resetting of totals. Reports produced include a Chart of Accounts, an Operating Statement, a Balance Sheet, and an Accounts Reconciliation Report. The system can accommodate 75 accounts, and each may be asigned a total of 9 sub-account numbers.

TITLE: MINI LEDGERS
PUBLISHED BY: PROGRAMMA INTERNATIONAL

This program acts as a mini ledger for an individual or a small "mom and pop" type business. Selected from any of the following categories: Sales and Cash Receipts, Payments and Expenses, Receipts File Search, Business Header, Sales and Cash Summary, Payments and Expense Summary, General Summary Statement, Expenses File Search, Receipts Index # Search, Expenses Index # Search.
Interfaces with Programma's CHECKBOOK program. Works with any printer that uses the Apple Interface Card, Auto-start ROM compatible. APPLESOFT 48K.
PRICE: DISK $49.95

TITLE: MICRO-PAYROLL
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

The Micro-Payroll package was designed to help small businesses minimize the time-consuming and tedious tasks of calculating payroll and preparing required reports. Various employee lists and reports showing earnings and deductions are provided for in the package, and at the time of data entry the system will automatically request and check input data for each employee to be paid. It also calculates all withholding and voluntary deductions and prepares payroll outputs. These outputs include a check register and either paychecks with stubs or a list of individual net pay amounts and paycheck stub equivalents.

TITLE: MICROPAY
PUBLISHED BY: COMPUMAX
MEMORY: 32K

Micropay consists of a series of computer programs that carry out the Accounts Payable functions for a small business. MICROPAY is designed to provide an essentially simplified sequence of operations that can be easily executed on a microcomputer by a person who has only the basic familiarity with such a system.

The first program lets you initialize your A/P transaction file and master file. Then you may start entering A/P transactions.

Data includes vendor name, invoice number, description, quantity received, purchase order number, quantity ordered, ledger account number to be debited, ledger account number to be credited, street address and city-state-zip of vendor.

Later programs provide the means to accumulate transactions into your master file, which becomes your A/P history file. You may select to pay accounts for a single date, or for a range of dates. The program will count the appropriate records and tell you the number of continuous check forms required. It will then print your checks, ready to be mailed to the vendors.

The programs will also keep the master file updated and transmit the A/P information to the JOURNAL file. From there, MICROLEDGER will pick them up and integrate them with your other transactions.

Service routines make it easy to list both the transactions file and the master file. In case you find an error, or some data has been changed since you entered it, update routines carry out the changes quickly.

Reporting routines include facilities to output the following reports:
Cash requirements (single date/range of dates)
A/P single vendor/all vendors
A/P single date/range of dates

The user manual explains options in detail; contains sample data and sample runs; shows the exact format of check form and stub form to be printed with the company name and bank numbers to be able to use printing program.

PRICE: DISK, 140.00

TITLE:MICROPERS
PUBLISHED BY: COMPUMAX
MEMORY: 32K

In the MICROPERS package, you get two systems for the price of one: a complete payroll system and a personnel management system.

The first program creates and updates your master file of PERSONNEL. Data includes:
Name and address, telephone, social security number
Married or single status
Action (like hire, raise, fire, etc.)
Date of action
Position
Salaried or hourly category, rate
Number of exemptions
Miscellaneous deductions
Job or work codes

The second program sets up and maintains the file for PAYROLL transactions:

regular and special times worked, percentage on each job or work code. Subsequent programs compute the PAYROLL REGISTER. Once all deductions and figures are checked and approved. PAYCHECKS are printed and payroll transactions are journalized.
The documentation includes the current Federal and California State withholding tables. By examining these tables along with the commented data statements that hold the rates and the cutoffs, it will be easy for the user to update the program for a future change in rate, or to customize it for another state.
Further programs produce:
Annual W-2 Forms
Values for quarterly 941 report
Job Cost Report/Personnel
History for any employee
Complete history for all employees
The user should back up the PAYROLL file before carrying out the PAYROLL REGISTER computation. Then the same data may be recovered, should an update be necessary before printing the checks.

PRICE: DISK, 140.00

TITLE: MICROREC
PUBLISHED BY: COMPUMAX
MEMORY: 32K

Microrec is the Accounts Receivable counterpart package, quite similar to the A/P system.
The data employed by MICROREC include:
Customer name and address
Purchase order number
Invoice number
Invoice date
Amount
Description
Quantity Invoiced
Waybill Number
Ledger account number to debit
Ledger account number to credit
"Conversational" programs help you enter the data rapidly and easily. A transaction file holds your A/R until a period is ended and you want to accumualte them into the master file.
The master file is a permanent record of all A/R entries and customer payment receipts. Both the transaction file and the master file may be easily inspected and updated at any time.
There are several reporting routines. You may ask for the following outputs:
Print invoices
Aged Trial Balances (under 30 days, 31-60 days, 61-90 days, over 91 days)
Receivables by customer. You have the option to request report for a single customer or for all customers.
Receivables by Date. In this program you can ask for a statement covering a single date or a range of dates. The statements will also produce the corresponding cash projections.
Finally the journalizing option will create the journal file entries that cor-

respond to each A/R as it is entered as well as to the receipt of each customer payments as it is input.
These transactions will ripple through your trial balance, costing, profit and loss statement and balance sheet - if you are also a user of MICROLEDGER.
PRICE: 140.00

TITLE: MICROINV
PUBLISHED BY: COMPUMAX
MEMORY: 32K
MICROINV is a series of computer programs that carry out the INVENTORY CONTROL functions for a small business.
There is an inventory transactions file and a master file. The data employed are the following:
Item number and description
Quality on hand
Quantity on order and delivery date
Unit price and name of units used
Lead time, Reorder point and Safety stock
ABC class describing frequency of usage
Vendor name
Job allocation
Each transaction is identified by entering the quantity issued or received, current price and job or work order classification for an issue.
The program will accumulate the transactions: current average cost, LIFO (Last-In-First-Out) cost, year-to-date usage and job cost allocation will be updated.
At anytime you may ask for:
Stock Analysis Report, showing your standard inventory stock data and stock valuation.
ABC Analysis, breaking down the inventory into groups separated by frequency of usage.
Job Cost Report/Materials, showing totals allocated to each job or work code used. When this report is used jointly with Job Cost Report/Personnel in MICROPERS, you get complete job cost control.
Economic (or Optimal) Order Quantities for all items for which you have cost of placing an order, expected annual demand and annual inventory carrying cost available.
Finally all inventory receipt or issue transactions will be journalized and made available to MICROLEDGER for automatic entering into your trial balance, posting and financial reports.
PRICE: DISK, 140.00

TITLE: MICROLEDGER
PUBLISHED BY: COMPUMAX
MEMORY: 32K
MICROLEDGER performs the essential duties of dual entry bookkeeping and the matching of revenues and expenses.
The first program builds and maintains your CHART OF ACCOUNTS master file. This file also holds your currents and accumulated totals in each account. You may have up to 884 accounts.

The second program sets up and updates your JOURNAL transaction file. Next, you will do your TRIAL BALANCE. You have several resources to make adjustments to your figures.
Once you approve of the figures, you go ahead and do your POSTING. The program now outputs an AUDIT TRIAL of all your transactions. These are sorted by account number, to make it very easy to trace the story behind the figures.
The audit trial output also becomes a fine front page for your string binders, in which you keep your actual records.
Another backup produced by the system is the diskette itself. Here you have two alternatives. You may just retain each data diskette as a permanent record for that accounting period. This practice allows you late reruns, modeling, etc. Or else, you may rename and resave your data files on the same disk. Say your September '78 journal becomes SEPT78. In this fashion, you may keep many old files on the same disk.
Finally, you get your financial reports. The fifth program produces your PROFIT AND LOSS STATEMENT. An easily read standard format shows all your accounts by category, your total revenues, total direct expenses, total G & A expenses and your income (or loss) for the period.
The last program prints (or displays on the screen) your BALANCE SHEET. Assets, liabilities and owners equities are shown by account and by totals. Since there are only two files, the system may be set up rapidly. Both current and prior period adjustments are made quickly, either by journal update and rerun or directly via chart update in a single operation. Thus the system is emininently suitable for "What-if" kinds of modeling usage.

PRICE: DISK, 140.00

TITLE: MICRO TAX/SERIES
PUBLISHED BY: AARDVARK

In an era when computers are an integral part of business and entertainment, and computer software is more and more sophisticated, Aardvark™ is yet another breed in advanced computer software. Aardvark's™ Micro Tax series is a true user-oriented Federal Income Tax package. Specifically developed by qualified tax professionals for use on personal home computers, this low-cost, time saving Aardvark™ Micro Tax package accurately and efficiently computes your federal income tax liability. Aardvark™ will display and fill in fascimily Form 1040 and related schedules and, when connected to a printer by means of a standard interface, will print out these fascimility forms automatically. Each program is designed to use the appropriate tax table or rate schedule. The Aardvark™ package includes an indexed instruction manual and input forms for easy input of tax data. To see how Aardvark™ can be tax-deductible, check the instructions in the binder of the manual. You can also use the binder to store pertinent 1979 tax records. Cure your headaches this tax season, order today ... and put the BYTE on the IRS with Aardvark™!

MICRO TAX I

MICRO TAX I	MICRO TAX II	MICRO TAX III
Form 1040	Form 1040	Micro Tax
Schedule A	Schedule A	Schedule C
Schedule B	Schedule B	Schedule D
Schedule TC	Schedule G (Inc. Avg.	Schedule E
(will not calculate	Schedule TC	Schedule SE
Income Averaging, Max	Form 4625 (Min. Tax)	Form 2119 - Sale of
Tax, or Alternative	Form 4726 (Max. Tax)	Personal Residence
Minimum Tax)	Form 6251 (Alt. Min. Tax)	

MICRO TAX IV
Expanded disk version
of Micro Tax III
Printed forms can be
filed with the IRS

MICRO TAX V
Expanded disk version
of Micro Tax III plus
Form 2210
Provided for hash totals
and batch processing
Printed forms can be
filed with the IRS

TITLE: OMNIBUS BANKING AND FINANCIAL SERIES
PUBLISHED BY: DIG MARK

DESCRIPTION: The Omnibus Banking and Financial Series has twenty option menu covering a full range of fiscal and investment related applications.

MAIN MENU

A FUTURE OF VALUE OF INVESTMENT
B FUTURE VALUE OF ANNUITY
C REGULAR DEPOSIT SAVINGS
D WITHDRAWALS FROM INVESTMENT
E FUTURE VALUE INVESTMENT
F MINIMAL INVESTMENT INCOME
G NOMINAL INTEREST RATE
H EFFECTIVE INTEREST RATE
I ANNUAL INTEREST RATE
J ANNUAL DEPRECIATION RATE
K DEPRECIATION SCHEDULE DBM
L YEAR END SALVAGE VALUE
M DISCOUNT COMMERCIAL NOTES
N LOAN PRINCIPAL AMOUNT
O LOAN PAYMENT SCHEDULE
P FINAL LOAN PAYMENT
Q REMAINING LOAN BALANCE
R LOAN REPAYMENT PERIOD
S MORTGAGE CALCULATION
T HELPFUL HINTS OR QUIT

Call a letter and Omnibus will present the program, asking several simple questions. Let's take an example:
Press "O" (LOAN PAYMENT SCHEDULE)
It will ask: WHAT IS THE LIFE OF THV LOAN IN YEARS?
Say, for instance, 5 then RET
WHAT IS THE ANNUAL INTEREST RATE?
Say, for instance, 12 then RET
HOW MANY PAYMENTS DO YOU MAKE EACH YEAR?
Say, for instance, 12 then RET
WHAT IS THE LOAN PRINCIPAL AMOUNT $?
Say, for instance, 6789 then RET
Your answer will appear instantly:
REGULAR PAYMENT OF $170.55 ARE REQUIRED TO SATISFY THIS LOAN.
WOULD YOU LIKE TO RUN ANOTHER (Y or N)
If yes (Y), it begins the same program once more, if not (N) you'll be brought back to the main menu. You may terminate OMNIBUS in midroutine by depressing the CTRL and C keys together. OMNIBUS will respond.

TITLE: ONE-TYPE ACCOUNTING SYSTEM I
PUBLISHED BY: CHARLES MANN
MEMORY: 32K of RAM
HARDWARE: SINGLE DISK SYSTEM
MICRO PRINTER (opt.)

The One-Type Accounting System is a small flexible accounting system for

posting the income and expenses of a small business. The system has a set of forty standard accounts which the user may use or modify to fit his needs. The system operates with the company, division or profit center checking account to post all income and expenses of the business. The full reporting elements allow a summary of the accounts to date (a trial balance), detail of each account each month and a full check register with account distribution. All report elements may be printed or displayed at any time. The system posts to the checking account, keeps track of the check numbers and provides an instant display of the bank balance.

PRICE: DISK, 119.95

TITLE: ORDER ENTRY
PUBLISHED BY: COMPUMAX

In response to the business bookkeeping needs expressed by our customers, CompuMax is proud to announce the completion of our newest release, ORDER ENTRY.

If you find that you need a system which can handle documentation and control of both PURCHASE ORDERS and SALES ORDERS;

If you need to have your accounts payable, accounts receivable and inventory control records automatically updated and documented to reflect sales and purchase order activity;

If you need an *affordable* system;

then ORDER ENTRY may be what you've been waiting for.

Many small and medium sized companies have previously been unable to purchase computerized order entry systems such as those used by Fortune 500 companies because of high prices ranging into the thousands of dollars.

CompuMax can now offer you the first comprehensive order entry system at an affordable price.

ORDER ENTRY will handle PURCHASE ORDER functions using programs which can:

Generate and print purchase orders in mailable format.
Compute tax on taxable P.O.s.
Organize purchase order records by record number and/or by vendor.
Register deliveries against outstanding P.O.s.
Register payments against outstanding P.O.s.
Interact with the CompuMax Inventory Control System to update its records.
Print new copies of purchase orders for outstanding P.O.s.
Provide purchase order history reports for individual vendors or all vendors.

ORDER ENTRY handles SALES ORDER/INVOICE functions using programs which can:

Generate and print sales orders and invoices in mailable format.
Compute tax on taxable S.O.s.
Organize sales order records by record number and/or by customer.
Register shipments on your outstanding sales orders.
Register receipt of payments against outstanding sales orders.
Interact with the CompuMax Accounts Receivable System to update its records.
Interact with the CompuMax Inventory Control System to update its records.
Print new invoices for outstanding sales orders.
Provide sales order history reports for individual customers or for all customers.

TITLE: PAYCHECK I
PUBLISHED BY: CHARLES MANN

Freedom from manual check printing and posting are featured in this modular

addition to CMA's Print Check Accounting System I (Required and sold separately). The complete system includes all the features of the Payroll I and Payrecord System in addition to furnishing a ready-to-sign paycheck. The system will provide weekly, bi-weekly, semi-monthly and/or monthly payrolls including standard deductions for federal income tax, and Social Security. Three optional fields are user defined and special deductions or bonus payments can be entered at payroll time. The system uses the same check format as Print Check Account for a minimum check printing investment.

PRICE: DISK, 139.95

TITLE: PAYRECORD I
PUBLISHED BY: CHARLES MANN

Ability to post direct payroll expenses to the general accounting system. It's designed to operate independently of the accounting system while maintaining the accountability necessary to avoid missed entires.

PRICE: DISK, 129.95

TITLE: PAYROLL I
PUBLISHED BY: CHARLES MANN

Designed as a stand alone payroll system. The latest tax tables and Social Security formuals are incorporated to handle weekly, bi-weekly, semi-monthly and/or monthly payrolls. Three user defined deduction fields also allow for state income tax, disability insurance, union dues, or health insurance to be deducted and accumulated each pay period. One time special deductions can also be entered as payrolls are run. Reporting makes monthly, quarterly and annual tabulations easy and the system comes with a docuaments audit check system. Data on individual payroll entries are easily dislayed or printed to make W-2 preparation simple. Will handle regular salary payment, special (or bonus) salary or hourly payrolls (including mix rate hourly payrolls).

PRICE: DISK, 119.95

TITLE: PAYROLL
PUBLISHED BY: COMPUTER HOUSE DIV.

Enter, edit, delete and/or display all employees names, addresses, social security number, status, fed/state/city deductions, hourly rate or salary. To run enter date, beginning check number and bank balance. Then for salaried employees just type each employees number when instructed by the computer. At the end of the run the computer will print all checks with stubs. For hourly employees you run thru again and this time in the regular hours and overtime hours, again all payroll checks will be printed. At any time you can ask for a year-to-date summary for any employee or all.

PRICE: $90.00

TITLE: PAYROLL
PUBLISHED BY: LMA, INC.

Computer: Apple II with Applesoft and 48K RAM with single or dual disks.
Special Features: 1) Complete source listing and file layouts provide for easy customization; 2) Completely menu-driven; 3) User-changeable tax rates; 4) User may run "test" payroll without permanently updating files; 5) Default values; 6) Password protected permanent update.
#Of Employees: 150 maximum (dual disk version) 45 maximum (single disk version).
#Of Taxes and Deductions: FICA, Fed, State Disability, State Tax, plus disk I/O for 7 additional deductions.
Tax Entry: User controlled, stored to file, parametered variables for customized deductions.
Pay Calculations: All frequencies of pay period and combinations: standard $/Hr.; supervisor premium or fixed salary; overtime rate.
Standard Reports: Personnel record; time card entry form; 941A list; W-2's, paycheck and stub payroll listing and summary report; seniority list.
PRICE: $299.00

TITLE: PAYROLL
PUBLISHED BY: VIDEO WORLD

A small business payroll, it figures all deductions including any special deductions for bonds or insurance etc. This program is cassette based in Applesoft and may be orderd on disk for a slight increase in cost. The employeed data is in a way which limited your employees by the size of your machine. The disk program is not limited by the machine memory. The program prints checks and all employer needed tax data for form 941.

PRICE: Cassette 70.00
Disk 90.00

TITLE: PAYROLL
PUBLISHED BY: COMPUTER PRODUCTS INTERNATIONAL INC.

This is an hourly and/or salary payroll. (Piece rate to be available Third Quarter 1980).
Has complete Employee file maintenance: add, change, delete, list and inquire. The Employee record contains all pertinent information, including: 3 different rates (regular, overtime and double time), base pay amount (for salaried employees only) 10 different voluntary deductions, additional pay, sick pay, meals, tips, and commissions, plus the appropriate quarterly and year-to-date figures.
Hourly and salary payrolls may be run together.
Allows interactive entry and editing for Payroll Attendance transactions.
The data entered is: employee #, regular hours (if other than default value), overtime hours, double time, any miscellaneous dollars to be paid, any one time deduction. For restaurants, meals and tips may also be entered.
For salary payrolls, the system will default to one period's base pay.
Prints the "Pre-List Audit Trail" showing the data entered above.
Automatically calculated gross pay, withholding taxes and any voluntary deductions selected or entered.
Prints the "Payroll Register" showing the dollar amounts for gross pay, FICA, S.D.I., E.I.C., federal and state taxes, total voluntary deductions (this period), and net pay for each employee.

Prints the payroll checks and check stubs in stub-over-check format. Ability to use pre-numbered checks. The starting check # and check date are entered through the CRT.
Prints the "Payroll Check Register" showing each check number, amount and employee's name.
Prints the "Current Earning Register by Department" showing dollars paid for each department.
Prints the quarterly 941A forms.
Prints the year end W-2 forms.
Allows interactive entry and editing of Manual Payroll transactions.
Employee Master List, Time Card Labels, Employee Deduction register, QTD/YTD Earnings Register, Weekly Pre-List Worksheet, Weekly Pre-List Audit Trail, Weekly Earnings Registers, Weekly Earnings Register By Dept., Weekly Deduction Register, Check Register, Written and Voided Check Register, Prints Payroll Checks, Prints 941A Forms, Prints W-2 Forms.

TITLE:PAYROLL PACKAGE
PUBLISHED BY: SOFTWARE TECHNOLOGY FOR COMPUTERS

2 disk drives, menu-driven program. Employee history include: NAME, ADDRESS #, ADDRESS #2 CITY, STATE, ZIP, FED EX, STATE EX., SOCIAL SEC. #, DATE EMPLOYED, DEPT #, CODE, EMPLOYEE #, STATUS, MARITAL STATUS, PAY RATE, OT RATE, VAC RATE, # VAC HRS. and PENSION PLAN. Program can generate weekly or biweekly payroll. Prints W-2, QTR REPORT, PAY CHECKS, MASTER AND CURRENT files. FEDERAL and STATE withholding taxes are build into program. Maintains a CASH DISBURSEMENT journal. Accumulates payroll for a 53 week period. generates numerous type of payroll reports. Allows data to be searched, sorted and edited. Prints DEDUCTION register and more. Maintain up to 125 EMPLOYEES/EXPENSES for quick and easy PAYROLL. Numerous error protection devices provided. PROGRAM diskette and instruction manual.
PRICE: $240.00

TITLE: PHYSICIANS RECALL SYSTEM
PUBLISHED BY: VITAL INFORMATION

RECALL has been primarily designed for use in an office setting in which input and retrieval of patient information is needed. RECALL contains 10 data fields all of which may be searched or sorted. Therefore, you may search for patients by diagnosis or date of last visit as well as name and address. A fast search routine allows quick access to the information. All commands are of the immediate response type.
The minimum system configuration for the RECALL programs is 32K RAM, single disk drive and ROM Applesoft. The use of a printer is optional.
FEATURES OF THE RECALL SYSTEM:
Superb data base management system.
System activated by PASSWORD entry.
10 data field inputs.
FAST binary SEARCH routines.
SORT and field.
Generate address LABELS.
CTRL characters for easy editing.
Supports parallel or serial RPINTER.
Supports TURN-KEY feature of Apple.
Easy to read DOCUMENTATION.
TESTED for over 12 months in office.
May be expanded to AUTO-DIAL.
PRICE: $40.00 (plus $1.50 handling) 7 programs on disk and documentation.
$3.00 documentation only.

TITLE: PRINT SHOP JOB ESTIMATING/JOB SCHEDULING
PUBLISHED BY: CALIFORNIA MICRO PRODUCTS
MEMORY: 48K

BENEFITS:
Estimating
Increase your PROFITS, estimate using the latest paper costs, bindery and copy prep rates. Give your customers IMMEDIATE and ACCURATE response to even the most complex estimates.
Increase the EFFECTIVENESS of your sales clerks.
Provides a DAILY REPORT of invoice activity.
Job Scheduling
Use your press time more EFFICIENTLY. SORT printing jobs by DATE DUE, PAPER TYPE, PAPER SIZE, PAPER COLOR, COLOR WASHUPS.
Bookkeeping
Print ACCTS. RECEIVABLE AGING reports (30-60-90 and over).
Automatic ACCTS. RECEIVABLE statement printing.
MONTHLY income statements and balance sheets.
ACCTS. PAYABLE reports.
And much more.
Payroll (optional)
Maintains up to 100 employees. Handles hourly, salaried, commissioned and piece rate pay methods. Prints paychecks, 941's, W-2's, employee journal, check register, deduction register and many other reports.
APPLE II is a trademark of Apple Computer Inc.
STANDARD FEATURES:
PARAMETER ENTRY:
Rates - Markup rate, Pressman hourly rate, Packaging rate, Plate rate, Ink rate, Tax rate, colored paper markup, and 11 x 17 setup.
Paper Costs - 27 variations of paper types are provided. All entires are variable entires whose types and difficulty factors are entered by the operator.
Bindery Rates - Collating, folding, cutting, padding, drilling, flat staple, saddle staple, and spiral binding.
Copy Prep Rates - camera, copy clean-up, X-up camera, repros, pastepup, typing, colored ink washups, typesetting.
Press Types - 10 press types are provided. Three different factors are entered for each press: Sheets Per Hour, Press Rate, and Press Setup.
PRICE TABLE GENERATOR:
This function will print out either a single price sheet for one type of paper or a complete set of price sheets for all paper types based on cost and rate factors entered in the Parameter Entry section.
ESTIMATING:
The operator is prompted by questions displayed on the video screen to enter the necessary information to estimate a printing job.
The immediate result is an estimate displayed on the video screen in the following format:

	EST. #1
Printing	$99999.99
Colored Ink	$99999.99
Copy Prep	$99999.99
Folding	$99999.99
Collating	$99999.99
Cutting	$99999.99
Drilling	$99999.99
Staple (Flat)	$99999.99
Staple (Sad)	$99999.99

Padding $99999.99
Misc. $99999.99
Sub-Total $99999.99
Tac $99999.99
Total $99999.99
Deposit $99999.99
Balance $99999.99

This information may then be printed as an invoice or quotation.

The Apple II Printshop Business System - The ultimate in cost-effective business equipment.

The Printshop Job Estimating/Job Scheduling programs, and the bookkeeping program (G/L, A/R, A/P) provide a complete system. The Apple II Business System includes an Apple II computer with 48K memory, 2 Disk II Floppy Disk Drives, Video Monitor, and Dot Matrix Printer.

TITLE: POINT OF SALE
PUBLISHED BY: COMPUTER DISTRIBUTORS

Controls sales in retail store, and manages all incoming money, keeps track of, and provides a printer record for, daily sales balances, cash drawer by; cash, check, charge cards; takes customer's name, and prints invoice; also adds customer's name to mailing list; computes tax, and change due customer; allows up to 25 salesmen, and credits the proper one with the sale; keeps salesman's totals for the month and computes commissions; manages up to 3,000 inventory items by: name of item, cost of item, number on hand, retail price, quantity on order, vendor #, commission (Y/N), taxable (Y/N), SALES TO DATE: TRACKS SALES BY INVENTORY NUMBER: TRACKS SALES BY INVENTORY RANGE (hardware, software, labor, books); inventory is updated with each sale; provides monthly totals, and yearly totals of sales by: salesman; inventory range; dollar amounts; permits quotations without altering inventory; salesman enters only the 4 digit inventory control number; the computer enters price (can be overridden) and description, and totals the sale (eliminates under-rings/over-rings). This can be used with an electronic cash drawer, which the computer opens at the close of each sale or on command. (Cash drawer and interface card available for $250, thereby eliminating the need for a cash register). The Executive functions of the program can only be accessed with the use of a password, so that the salesmen cannot know commission rates, sales to date and other confidential information.

THE VERSION WHICH RUNS ON 8" DRIVES WILL ACCOMMODATE (2 drives required): 3500 inventory items; 300 accounts receivable (permits charge sales to good accounts); 200 names and addresses of customers before dumping to mail list program.

PRICE: DISK, $795.00

TITLE: PRINT CHECK ACCOUNTING SYSTEM I
PUBLISHED BY: CHARLES MANN

Complete right down to printed checks with a descriptive stub. Reporting includes checking account balance, sumary of accounts to date, individual account postings by month, and the complete check register with distributions made to company accounts (or job accounts). The modular system will line up with Paycheck I payroll sytem to post and prepare pay checks for signature.

PRICE: DISK, 129.95

TITLE: PROFESSIONAL TIME MANAGEMENT
PUBLISHED BY: CHARLES MANN

This program is for those for whom time is truly money - consultants, accountants, lawyers, engineers, ets. The program keeps track of client or job number, the specific task being worked on, and the exact amount of time worked. The clock function continuously prints on the screen the elapsed time from the beginning of task work. Work can continue from assignment without time out to document time and work. At the end of the day complete work record is available for simple billing and recordkeeping.

PRICE: TAPE, 59.95
DISK, 64.95

TITLE: PROFESSIONAL SECRETARY PACKAGE
PUBLISHED BY: CHARLES MANN

The Professional Secretary Package is designed for the service professional who requires effective use of his/her billable time. The lawyer, accountant, or consultant will find the use of the system on his at desk computer will operate more efficiently and profitably. The program allows for a daily work plan of tasks to be done during the day. The on-board filing system keeps track of appointments for the coming year and allows productive scheduling. Client's phone numbers or other frequently needed numbers are available on demand from a special file. Case files, client reocrds or personal belongings can be recorded in the system file organizer. The system has a unique professional time management element which keeps track of billable time automatically as work is done and provides an end of day record by client and task.

PRICE: TAPE, 89.95
DISK, 94.95

TITLE: PROFESSIONAL TIME AND BILLING
PUBLISHED BY: SOFTWARE TECHNOLOGY FOR COMPUTERS

2 disk drive program written in assembly language and APPLESOFT II. Completely menu-driven. Maintain all billing of clients and personnel. Generates and invoices. Numerous reports based on all types of criteria. Easy data entry for RATES, CLIENTS, and MATTERS. Has SEARCH, SORT, CHANGE (on screen editing), VIEW and BALANCE FORWARD. IF you are a JOB CONTRACTOR, ATTORNEY, ACCOUNTANT, GENERAL CONSULTANT, or anyone that needs to charge for time, this program is a must. Complete turnkey operation. Numerous REPORTS are produced to aid in the TIME ANALYSIS PROCESS. All this and much more. Program diskette and instruction manual.

PRICE: $325.00

TITLE: PDP — PROGRAM DIRECTOR'S PLANNER PACKAGE
PUBLISHED BY: MEDIA SERVICE CONCEPTS

"REACH OUT" lets you plan your programming schedules for maximum effectiveness.
"CLOCK HOUR" is a color graphic clock hour wheel planner.
"DJ SHIFTS" makes your air shift scheduling problem easier.
"TIME TRACKER" quickly adds minutes and seconds to make things come out on time.
With the PDP Package you can apply your station's reach and frequency information to guide you to maximum effectiveness in scheduling current music, station promos, PSA's, and features.
A color graphic clock hour wheel lets you try out any number of combinations to plan the "perfect" mix of ingredients.
Other scheduling problems? The PDP will analyze air shifts, compute time for newscasts or specials, and help keep track of information for license renewals.

TITLE: PROPERTY MANAGEMENT
PUBLISHED BY: REAL ESTATE MICORCOMPUTER SYSTEMS, INC.

This program is designed for the property owner or manager who wants up-to-date tenant information and operating statements. It provides easy entry from your check book to a single entry general ledger. The income and expense accounts are the same ones used on APOD statements but may be changed.
Each program diskette will accomodate one year's transactions and all tenant information for approximately 25 property units. Multiple diskettes would be used for more units and additional owners or managers.
The tenant information file includes names, addresses, phone number, contract start and end dates, various deposits, and comments concerning the tenant or the unit. Separate files are maintained for active and inactive tenants.
The general ledger file contains transaction data. Each entry has a date, check number, account classification, tenant, and comment (or payee). Tenant deposits are shown in a separate account and not included in revenue until (and if) they are realized as revenues when the tenant leaves.
Printed reports include:
Tenant listing (active and inactive)
General Ledger
General Ledger by tenant
General Ledger by account
Operating Statement
Operating Statement by tenant

The operating statements show current month and year-to-date amounts, beginning and ending account cash balances, and percentages for income and expense categories.

TITLE: PROPERTY MANAGEMENT PACKAGE
PUBLISHED BY: BLUE LAKES COMPUTING

PROPERTY MANAGEMENT PACKAGE is designed for rental property money management for up to 250 units per account, unlimited number of accounts. It records and calculates accounts payable, accounts receivable, and general ledger; it keeps track of tenants by due date and by apartment; has automatic aging of current and future tenants for both apartments and parking. Keeps track of income and expenses by building and account number. Available immediately.
PRICE: $695.

TITLE: PROPERTY MANAGEMENT SYSTEM
PUBLISHED BY: REALTY SOFTWARE

The programs may be purchased separately or as a full system at a slightly lower price.
RENTAL EXPENSE ANALYSIS PROGRAM (REAP)
REAP is designed to provide expense information for each building in payment-by-payment and summary format including TAX READY TOTALS for IRS REPORTING and audits.
BUILDING PAYEE REPORT displays expenses for any building, for all or selected payees. A year's payment record, including total yearly expense, average monthly expense and total number of payments, can all be displayed on-screen at once for any regularly paid account. Duplicate or missed payments are easily identified.
UTILITY SUMMARY REPORT displays yearly, year-to-date, or monthly average utility expenses for each building under the categories gas, electric, water and trash. This allows quick building-to-building comparisons identifying any out-of-line expenses.
TAX TOTALS REPORT displays totals for each building under the categories utilities, insurance, property tax, loan interest and repairs. This report can be submitted "as is" with Schedule E when filing taxes.
SPECIAL ACCOUNTS may easily be set up to track auto, general office, management, advertising, telephone or any other expense type.
COMPLETE DATA INPUTING, EDITING AND SORTING capabilities, all with extensive error recovery, provide easy data file maintenance. Expense data may be added to the file and the latest reports displayed or printed for a permanent expense record whenever needed.
RENTAL INCOME INFORMATION PROGRAM (RIIP)
RIIP is designed for the property owner or manager who rents property (of any kind) on a monthly basis, providing background information on each rental and complete income tracking that is timely and accurate.
RENTAL INFORMATION for each unit includes up to three names, four phone numbers, date rented, rent amount and deposits. This information, along with income tracking data, is stored on diskette and can be recalled and displayed on-screen at any time or printed for a permanent record providing immediate access to all pertinent rental data.
Rental information can easily be changed, added to or deleted using programs input-editing facilities insuring up-to-date data.

FEATURES: Tenant information; late rent reports; YTD & monthly income; handles — partial payments, returned checks, advance payments; 5 digit expense accounts; building expense report; vendor expense report; income tax report; all reports can be printed; complete documentation; easy data entry & edit; 200 units per file.
32K, 1 disk system.
PRICE: $225.00

TITLE: PROJECT BOSS
BUSINESS DATA BASE SYSTEM
PUBLISHED BY: CHARLES MANN & ASSOCIATES

The Project Boss for the TI 99/4, Apple and TRS-80 is a disk based system designed to assist the project manager of construction jobs or consultants managing engineering or architectural engagements in the financial management of individual projects. A Business Data Base System for the TRS-80 allows the user to define and build data bases for such purposes as inventory control, general ledger accounting, accounts payable and accounts receivable. It is compatible with TRSDOS, NEWDOS and 3.0 DOS.

PRICE: $89.95

TITLE: PROJECT PLANNING and BUDGETING
PUBLISHED BY: CHARLES MANN

This program is designed for the manager who is responsible for the costs of projects under his direction. This may be the engineer, the consultant, the lawyer, the accountant or the general contractor. The program Integer Basic keeps track of the budget, actual costs, and budget variances. The package includes elements to bid costs, account for costs, estimate completion costs of a project in progress, store data on tape or disk, display cost variables and provide printed cost and budget runs. The system is flexible allowing for changes as projects continue and special account structures for special business needs. The system requires Disk version in Applesoft.

PRICE: TAPE, 89.95
DISK, 94.95

TITLE: PURCHASE ORDER CONTROL
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

The Purchase Order Control package permits businesses to maintain control of their external purchase commitments by recording all transactions against a given purchase order. The system provides information in summary or detail on all unfunded commitments and provides reports on unreceived merchandise by purchse order number and vendor or item number.

TITLE: QUIKDIRT — CAPITAL BUDGETING
PUBLISHED BY: WYMAN ASSOCIATES

Your company undoubtedly has several opportunities for capital investment, but limited resources such as cash, key leaders, office space, legal staff, specialized equipment, fuel supplies, etc. This program can show you how to make the

best set of investments given your company's constraints. Extensive sensitivity analysis capability lets you determine the effect of changes in revenues, resource limitations, or resource requirements for each project.
If you have several new products (or projects) and you simply don't have enough floor space or sales training time, you can use this package to determine which set of new products gives the best possible payoff subject to your specific limitations. This tool can also be used to explain the amounts of additional resources you would need (e.g. new hires, cash, or floor space) in order to bring the company that extra million dollars of sales.

PRICE: $120.00

TITLE: QUIKDIRT — CASH REPLENISHMENT
PUBLISHED BY: WYMAN ASSOCIATES

Virtually all organizations require cash replenishment decisions that are similar to inventory purchase decisions. The more often you visit the bank to use your credit line, the greater your cost of loan fees that are fixed for each transaction. But if you don't visit the bank often enough, you run the risk of cash shortages, plus higher interest costs, since the amount of each transaction will be larger. This program allows you to explore this cost tradeoff problem.

PRICE: $120.00

TITLE: QUIKDIRT — INVENTORY CONTROL
PUBLISHED BY: WYMAN ASSOCIATES

There are five programs in this package, for various inventory control situations. This package is not an inventory record keeping system. Instead, it is designed to help you make the right decisions about which products to stock and how much to order at a time, in order to minimize purchasing costs and inventory carrying costs.
For example, computer store owners can use it to decide how many Apple II's should be ordered at one time, and how frequently orders should be placed. The inventory control package can also be used to screen all items in a retail store or a manufacturing plant to determine which items you should be stocking as part of your regular inventory, and which should be dropped.

PRICE: $120.00

TITLE: QUIKDIRT — IN-PROCESS INVENTORY
PUBLISHED BY: WYMAN ASSOCIATES

In a multi-stage production process, each stage passes a certain fraction of product to the next stage, some is scrapped, and some is recycled for re-work and re-inspection. It is necessary to estimate the size of the inter-stage inventories, how much input is required to assure a given yield, and the effects of changes in the fractions of scrappage and recycle.
This program helps you estimate these values by means of an underlying matrix model of flow patterns which you supply to the program. You can change the starting levels of product in any stage, as well as the amounts and directions of flow. You can also adjust the number of time periods into the future in order to see how inventory levels will change in each stage over time.

PRICE: $120.00

TITLE: QUIKDIRT — PRODUCTION SCHEDULING
PUBLISHED BY: WYMAN ASSOCIATES

In a production shop, the foreman needs to prioritize jobs into a schedule. Various factors have to be considered to come up with a satisfactory schedule. You can maximize throughput (rates of jobs completed), but you also have to be concerned about customer priorities, time left until jobs are late, minimizing the number of late jobs, and watching out for the worst case of job lateness.
This production scheduling package can help you learn more about and improve your scheduling procedures, predict completion times, and in general provide a more formal method for straightening out shop scheduling problems.
Each job can be thought of as requiring one or more "processes". A process normally occupies one machine or one specific person. For example, milling, grinding, polishing, and packaging could be considered processes. This package allows you to trade off the maximum number of jobs and processes (e.g. you could have 5 jobs and 300 processes, or 300 jobs and 5 processes).
By the way, you don't have to be a manufacturer to use production scheduling. Every production center from a typing pool to graphics designers to attorneys have jobs and due dates to meet. This package can help each case.

PRICE: $120.00

TITLE: QUIKDIRT — TRANSPORTATION PLANNING
PUBLISHED BY: WYMAN ASSOCIATES

This program allows you to determine a least-cost pattern of shipments that will get required quantities from sources to destinations, keeping supply and demand in balance. It can also be used for several kinds of assignment problems such as the need to determine a least cost pattern of assigning trucks to routes, drivers to shifts, and routes to shifts.
It is possible to have up to 3000 source-destination combinations. This will allow 20 sources and 150 destinations, for example. Inputs include the amounts of supply and demand at each source and destination (respectively), and the per-unit cost of each source-destination shipping mode. Outputs include the optimal shipments (source, destination, amounts) and total budget.

TITLE: QUIKDIRT — WAREHOUSE LOCATION
PUBLISHED BY: WYMAN ASSOCIATES

If you have a growing business with several distribution outlets, and are planning to add new warehouse locations, you can use this package to help decide which warehouse sites should be selected. Inputs include an estimated shipping budget from each warehouse to each destination that can reasonably be supplied by that warehouse. The output is a prioritized list of warehouse sites to be developed and which warehouses should be supplying which markets.

PRICE: $120.00

TITLE: REAL ESTATE ANALYSIS MODULES
PUBLISHED BY: REALTY SOFTWARE COMPANY

1) Home Purchase Analysis, 2) Tax Deferred Exchange, 3) Construction Cost/Profit, 4) Income Property Cashflow, 5) APR Loan Analysis, 6) Property Sales Analysis, 7) Loan Amortization.
PRICE $35.00 per module, cassette or disk

TITLE: REAL ESTATE ANALYZER
PUBLISHED BY: HOWARDSOFTWARE SERVICES

A software package for Apple computers takes the guesswork out of real estate investing for professionals and individuals alike. This package helps you make intelligent buy and sell decisions by computing the true net cash flows and annualized after-sale return-on-investment for any property you define.
The software allows you to view the direct impact of loan terms, tax bracket, depreciation schedule and holding period, as well as the separate inflation rates for rents, property values, expenses and taxes.
All information is itemized in tabular form on the video screen or a line printer, year-by-year for the ten years after purchase. Use with a disk unit also allows you to file, retrieve and alter information on your properties.
Real Estate Analyzer is available on disk or tape for Apple computers with 48K and Applesoft.
PRICE: $49



TITLE: REAL ESTATE ANALYSIS PROGRAM
PUBLISHED BY: POWERSOFT

The Real Estate Analysis Program is designed to provide three features. A powerful real estate investment analysis for buy/sell decisions and time to hold decisions for optimal rental/commercial investments. Generation of complete amortization schedules consistent with banking practices and schedules. Generation of depreciation schedules for selecting the best depreciation schedule for your use and determination of optimal switch-over points to straight-line to maximize depreciation. All three options are designed for screen or printer output.

PRICE: Tape, $14.95

TITLE: REALTY PACKAGE
PUBLISHED BY: PROGRAMMA INTERNATIONAL

This financial Realty Package calculates Future Value, Present Value, Price to Yield, Yield at Price, Amortization Schedules, Cash Flow Analysis with uneven payments, and Installment Sales. Includes complete term definitions and many examples. APPLESOFT 48K.

PRICE: DISK $59.95

TITLE: RECALL — RESEARCH TO EXPLORE AND CHART AUDIENCE LISTENING LEVELS (THE ARBITRON ANALYSIS PACKAGE)
PUBLISHED BY: MEDIA SERVICE CONCEPTS

"Mutual Exclusive" is a cume analysis system to explore patterns of listening behavior.
"QUARTER-HOUR" lets you see which day parts are strongest.
"TRENDS" paints a graphic picture of station and competitor trends and projections.
"MAINTENANCE" examines listening patterns and compares several stations.
"PEEK-A-BOOK" looks at ARB's sample and generates guidelines for interpreting your ratings.
"EFFICIENCY" tracks hour-by-hour listening for a station and the market.
There are thousands of numbers inside every ARB book. RECALL helps you find the key data, then translates it for meaningful insights into station and market dynamics.
This sophisticated diagnostic package shows the relationships hidden within the numbers. It examines cumes and quarter-hours, illustrates trends and projections, and tracks the hour-by-hour positioning of your station.
An important feature is the ability to look at Abritron's final sample to calculate the margin of error for their audience estimates. You will also see such useful information as Time Spent Listening and Audience Turnover.

TITLE: RECORD OF INVENTORY
PUBLISHED BY: COMPUTER HOUSE DIV.

Records part number, part name, category name, description unit price, quantity in stock, and review inventory items by part number or category name. Maximum 250 items.

PRICE: $35.00

Similar to above except up to 3000 items (very fast) **$95.00**

TITLE: RENTAL MANAGER
PUBLISHED BY: BLUE LAKES COMPUTING

A total system for rental property management. The RENTAL MANAGER handles accounts receivable, accounts payable and the general ledger. It also maintains the chart of accounts and buildings, listings of present and future tenant, and will print reports and notices for "problem tenants." The RENTAL MANAGER automatically posts entries between systems and creates back-up copies of information entered. The system includes a separate instructional version and full user documentation.
Memory: 48K.
PRICE: $695.00

TITLE: RENT VS. BUY
PUBLISHED BY: REAL ESTATE MICROCOMPUTER SYSTEMS, INC.

This program provides an analysis of the before- or after-tax gains or losses associated with the purchase of a home versus renting the home or a similar unit.
The user must specify certain information about the home to be purchased: price, financing terms, closing costs, utility and other expenses, expected annual rates of change or certain expenses, size of home, etc. Similar information about the rental is used for comparison: yearly rent, yearly expenses, anticipated changes in rent and expenses, and size of the rental.
Once the information is entered, the user may view a graphical analysis, print a 2 page report, and selectively change items to see the effect upon the analysis.

TITLE: RETAIL INVENTORY PROGRAM
PUBLISHED BY: RAINBOW

This program will save information on up the 375 stock items. It has the following features:
* list number in stock and tells if minimum or maximum quantity points have been exceeded
* tells how many have been bought and sold in the present time period and what they cost
* keeps track of the inventory value using the average value of an item (this is a compromise of FIFO and LIFO).
* keeps track of up to three outstanding orders per item including quantity on order, date of order, P.O.#, and vendor
* lists up to three vendors per item
* calculates total inventory value
* prints out to a printer either a summary for the present time period or a listing of the quantity on hand, status (understocked/overstocked), and number on order for each item.

PRICE: DISK, 79.95

TITLE: RETAIL MANAGEMENT SYSTEM
PUBLISHED BY: CHARLES MANN

This system is designed to assist the small retail store in his purchasing, pricing and credit programs. The program uses a return on investment test to

assist on purchases with quantity discounts. The user does not have to read complicated output data for guidance as the program tells him to buy quantity, buy only what he needs or that the analysis indicates a marginal decision. The pricing element allows the retailer to select his margin and enter his unit costs. The computer displays exact prices and standard retail prices for the margin and cost selected. The program also has a check verification element for check approval.

PRICE: DISK, 64.95

TITLE: SALES FORECAST
PUBLISHED BY: PROGRESSIVE

This program will give you the best forecast using the four most popular forecasting techniques, such as linear regression, log trend, power curve trend, and exponential smoothing. The program uses artificial intelligence to make the decision on the best fit and displays all results for manual operation if desired.

PRICE: TAPE, 9.95

TITLE: SALES TICKET FILE
PUBLISHED BY: VIDEO WORLD

This program keeps track of your sales tickets in order of entry. It will print out a list of ticket numbers and customers names and type an account of sale. It is good for a small business and is available only on disk.

PRICE: Disk 70.00

TITLE: SCHEDULE/PLAN
PUBLISHED BY: EDUCATIONAL PROGRAMMING

The SCHEDULE/PLAN SYSTEM, employs a low cost microcomputer to assign work shifts and days off for employees of extended hours services (those which operate more than eight hours per day or more than five days per week). Automatically taken into account are specified constraints and preferences set by management and labor. SCHEDULE/PLAN allows the user to design a wide range of work schedules, including ones having either five 8-hour or four 10-hour shifts per week. The user can rapidly calculate the number of on-duty positions seven days a week, or the number of on-duty personnel; compute a distribution of on-duty personnel by day of the week to match a user-specified distribution of work by day of wek; determine the number of personnel that should start periods of consecutive days off duty on each day of the week; and print or display employees' schedules in calendar form.

Use of SCHEDULE/PLAN'S design techniques has already yielded significant benefits to organizations providing extended-hours services:

a. Improved matching of on-duty staffing levels to workload patterns by shift and day of the week.
b. Improved ability to revise work schedules to meet changing workload patterns or numbers of employees.
c. Improved ability to balance management's need for efficient allocation of agency personnel and employees' need for satisfactory schedule properties.
d. Reduced administrative time required to design schedules.

PRICE: DISK or TAPE, 200.00

TITLE: SOME COMMON BASIC PROGRAMS
PUBLISHED BY: HIGH TECH

High Technology, Inc. has available on diskette the entire collection of programs featured in the book Some Common Basic Problems by Adam Osborne and Associates, Inc. These programs require Apple's floating point basic (Applesoft II) in ROM.

FEATURES: The Adam Osborne and Associates book, SOME COMMON BASIC PROGRAMS is included along with the diskette.

For ease of use the seventy-six programs have been separated into four categories:

BUSINESS
MATHEMATICS
STATISTICS
MISCELLANEOUS

To aid in location of the appropriate program, the table of contents for each category is displayed giving you a MENU from which to choose the program you want to execute.

PRICE: 40.00

TITLE: SOFTCARE OVERVIEW
PUBLISHED BY: PROFESSIONAL BUSINESS SOFTWARE

SoftCare is a series of programs designed to automate the billing and record-keeping functions in a medical office of one to thirty physicians. SoftCare operates on a wide variety of computers, video terminals and printers. Written in UCSD Pascal, the system functions on any computer which supports UCSD Pascal, from all personal computers such as the APPLE to large Digital Equipment Corporation (DEC) mini-computers, with dozens of selections in between. The right size system for your office is dictated by the number of patients records you need to retain on the computer at one time.

The portability of SoftCare means that you can start now with a low cost system that is within your budget. As your needs grow you can add more storage capacity or even change computers without losing your investment in the software or retraining your office staff of a new system. Growth is smooth and orderly.

SoftCare may be described most simply as a series of programs which allow you to easily update and prepare reports from comprehensive master files of patient and insurance information. The size of these files is flexible, which allows you to easily add more patients at a later date, without paying for the storage now.

The patient file consists of the individual patient records which contain billing and insurance information. Patients are stored alphabetically in the file. No patient ID number is required, although you have the option to use an ID number if you choose.

SoftCare is totally interactive with the user. The fill-in-the-blank screen formats are practically self-explanatory. As the operator enters the information the system checks for correctness and completeness. This way invalid data is not allowed into the system to begin with. Since errors are detected at time of entry, correction of any error is fast because the operator still has the source document in hand, and repetitive errors are avoided.

The unique "browsing" feature of SoftCare lets you quickly and easily page through the alphabetical electronic file of patient records. When you want to query the status of a patient record, simply enter the patient's last name then press the "INQUIRY" key. The patient record is displayed on the video screen instantly. If this is not the patient you requested because of duplicate last names, misspelling, etc., simply browse forward or backward through the file using the "FORWARD" or "BACKWARD" paging key. This is similar to using your manual filing system only infinitely faster when you let your fingers do the walking!

The flexible design of SoftCare allows it to work the way you work. For example, assume that your operator is posting cash receipts when there is an immediate need to inquire about another patient and print a demand bill. With SoftCare it is very easy to change from one function to another. There is no need to return to a beginning point of the program (sometimes called the main menu or directory) to change tasks. Simply press the "INQUIRY" key after the patient you want is typed onto the "Patient" screen. To then print the bill for that patient just press the "PRINT BILL" key.

SoftCare produced a complete set of forms and reports as required in a physician's practice. These include: private and insurance bills, aged accounts receivable by patient and insurance carrier, doctor revenue reports, and exception reports for tracking claims.

Reports can be printed at any time, not just on a fixed schedule. For example, the Daily Transaction Register can be generated after the day's activity, or the morning of the next day, or left to accumulate for a period of several days or more. Reports on patients charges, cash flow, or accounts receivable are available any time, not just at the end of a given time period. With this flexibility you can instantly and automatically prepare patient bills and insurance claims on demand - while the patient is still in your office if you like. Reprinting of a patient's bill or resubmission of a lost insurance claim can be done at the push of a button.

With SoftCare there are no rigid schedules or batching requirements that you must adapt to. This flexibility to easily adapt to your office environment is key to the successful implementation of any computerized system. If the system is flexible, easy to learn and easy to use, it is readily endorsed by your office staff. Their job becomes simpler, not more rigid and complex.

SoftCare hardware specifications. SoftCare operates on any Z-80, 6502, DEC 11/03 system which runs UCSD PASCAL, Version 2.0. The DEC 11/03 runs Pascal as it comes from Softech, the official distributor of Pascal for UCSD. PBS has implemented UCSD Pascal on Cromemco, Dynabyte, Onyx, and Vector Graphic through a relicensing agreement with Softech.

TITLE: SURVEY ANALYSIS
PUBLISHED BY: COMPUTER HOUSE DIV.

Analyze the coded results of a small to medium size survey, e.g. 80 responses to a questionaire of 12 questions.

PRICE: $23.00

TITLE: TAX PLANNING PROGRAM
PUBLISHED BY: CHARLES MANN

This program is designed for the small accounting practice, the business financial officer or company executive and provides an oportunity to test federal income tax consequences of various income variables. Similar to a "big eight" accounting firm's tax department model, the program assists in preparation of a pro-forma income statement and total tax bill. The program estimates taxes for individuals and corporations using such variables as personal service income, capital gains, rents, dividends and ordinary corporate income. The program may be directed to use certian income inputs or assist in actually estimating income from multiple sources. The latest tax rates are incorporated so no major data input is required. The Integer Basic program is available on tape and disk. Disk version is Applesoft.

PRICE: TAPE, 89.95
DISK, 94.95

TITLE: TAX PREPARER
PUBLISHED BY: HOWARD SOFTWARE

Includes forms most needed by businessmen (Sched C,D,E,F,G,SE; Form 2106, 3468, 4562, 4797) as well as all the usual forms for individuals (Sched A,B,R&RP.TC; Form 1040, 5695). Powerful disk-based package provides automatic linking of results from all forms and convenient record-keeping as well.

PRICE: DISK, 69.00

TITLE: TAX PREPARATION
PUBLISHED BY: AARDVARK SOFTWARE INC.

Aardvark Software Inc. brings you the latest advances in tax preparation with the new Individual Income Tax package. This program can calculate an individual's federal and state income tax liability, and print Federal Form 1040, all lettered schedules (A through TC) and the most frequently used numbered and state forms.

For the convenience of the preparer these forms and schedules are printed in a format approved for filing with the Internal Revenue Service and the appropriate State Department of Revenue.

Designed by computer professionals and CPA's with 17 years of "Big Eight" tax experience, this comprehensive program meets or exceeds the requirements of most professional tax preparers. No special training is required and by simply following the example in the instruction manual, even a novice user can begin to process returns in one hour. The program is both convenient and cost-effective. It eliminates delays and costs for input form sent to outside processing services. Assuming an average process charge to a client is $20, it takes only 35 processed returns to recover the software costs for the federal program.

State programs are available for California, Illinois, Michigan, Minnesota, Ohio and Wisconsin. Programs for other states are also available based upon demand. Both federal and state programs will be available in November 1980 and updated January 1, 1981 to reflect any changes in tax law or forms occuring after 11/1/80.

The program is compatible with most computers. See Micro Tax this section.

PRICE: Federal Program $695.00
State Program $300.00
Udpates - 1981 and later 60% of current price

TITLE: TAX DEFERRED EXCHANGE MODEL
PUBLISHED BY: REALTY SOFTWARE

This program shows the total financial impact of a tax deferred or partially tax deferred property exchange allowing investors and realtors to make informed decisions when trading property up or down.

The model considers the effect of appreciation, depreciation, legal fees, property improvements, mortgages and boot on the actual total gain realized, the gain deferred and the amount taxable. The model also calculates the impact the property exchange will have on the new depreciable tax basis.

As many scenarios as desired may be analyzed varying the amount of boot (cash retained from trade) and other pertinent exchange criteria.

Studies may be done on several different potential trade properties allowing a very thorough financial comparison of the properties involved and an analysis of the best method of structuring the financing.

Analysis may be printed for a permanent record.

PRICE: TAPE or DISK, 20.00

TITLE: THE ELECTRIC PROGRAMMER
PUBLISHED BY: MEDIA SERVICE CONCEPTS

A Desk-Top Micorcomputer System for the Radio Program Director.

The professional radio Program Director of the 1980's can now utilize a powerful, yet affordable microcomputer system.

With a complete package you can: thoroughly analyze ratings and market position with sophisticated software and full color graphics. Plan programming strategy, music and promo rotation. Use the system for school closings, record store surveys, and even for live "talk show" production communication. Convert your paperwork chores to microcomputer efficiency, and keep a permanent record of your work on paper or discs.

There are no "hidden" line charges or operating expenses. A microcomputer system is completely self-contained. Just set up the components, connect your TV monitor, and use the system day and night—as long as you wish.

You can also learn to write your own software in simple, easy-to-use BASIC language. And there are hundreds of additional pre-packaged programs available. You'll have easy access to national news sources or larger computer systems, and even be able to arrange link-ups with other radio Program Directors around the country.

The microcomputer explosion can dramatically enhance your radio programming skills—by giving you insight into audience ratings, and helping to organize important information for intelligent decision-making.

TITLE: THE CASHIER
PUBLISHED BY: APPLE

The Cashier is an inventory control and cash register simulation system. It simplifies the retailer's job by eliminating redundant work in filling out lists and forms. Once a customer account is entered, the information is automatically used to generate sales receipts, billing records, mailing lists, and accounting summaries. The Cashier also gives a retailer better control of inventory, resulting in reduced shrinkage.

The Cashier can process backorders, down payments, and refunds, managing an inventory of more than 800 stock numbers. The system is packaged in a binder with a manual and diskettes.

PRICE: DISK, 250.00

TITLE: TINY TROLL
PUBLISHED BY: MICRO FINANCE

TINY TROLL is a new interactive data analysis system specially designed for use in business, finance, and investment applications. Features: High resolution plotting of multiple data series, with automatic scaling and complete labeling. Multiple regression with as many as 8 independent variables, complete statistics, ability to save and analyze residuals. Data transformation using all standard mathematical functions to operate on one or more sets of data simultaneously. Tabular report generation and printout. Mathematical function plotting Simplified data entry and editing. Disk storage and retrieval of data. Built-in error handling and recovery. APPLESOFT ROM. Second disk and printer optional. 48K.

PRICE: DISK $100.00

TITLE: TRAVEL
PUBLISHED BY: COMPUTER DISTRIBUTORS

Designed for the ASTA travel agency, this program will accomplish all of the normal travel agency accounting functions (including full ticket inventory control, voucher search, etc). We estimate that in an agency generating $1 million annual sales, this system will save 60 hours a week. This is the only package approved by ASTA.

TITLE: VU#1
PUBLISHED BY: PROGRESSIVE SOFTWARE

Accepts data from VISICALC, Relocates data and names, Corrects data and names, Creates an out file that can be loaded into VISICALC.

PRICE: $49.95

TITLE: VU#2
PUBLISHED BY: PROGRESSIVE SOFTWARE

Same as VU#1 except it will operate automatically to do repetitious functions, such as payroll.

PRICE: $59.95

TITLE: VU#3
PUBLISHED BY: PROGRESSIVE SOFTWARE

Includes UV#1 and VU#2. Will load data from any program's array statement and load it into VISICALC. (Will also do the reverse.)

PRICE: $69.95

TITLE: VISCALC
PUBLISHED BY: PERSONAL SOFTWARE
MEMORY: 32K

Take virtually any problem you would explore using calculator, pen, and paper, working in rows and columns. Apply VisiCalc and you'll see why every reviewer of this product has said the same thing: VisiCalc is the most useful, most important program yet developed for personal computing.

With VisiCalc, you work with an electronic worksheet of up to 63 columns and 254 rows. At the juncture of any column and row you can type in words or numbers. To put VisiCalc to work, you first create any format or form you need by typing in words — just like writing column heading across the top of a piece of paper and items down the left side. Then, where you want the worksheet to perform a calculation, you type a formula. VisiCalc automatically performs all arithmetic functions, net present value, and transcendental functions. Instantly -and we mean instantly - VisiCalc displays the results. And if you change any of the numerical data, the electronic worksheet instantly displays a new result. Automatically. You can play "what if" as often as you wish to solve thousands of different problems. When finished, you can get a hard copy of all the information on your worksheet from your computer printer.

Absolutely no programming is necessary. VisiCalc does all the work.

Who is using VisiCalc.

Anyone who works with numbers.

MANAGERS and MANAGEMENT CONSULTANTS plan budgets, compare actual results to budgeted forecasts, and modify projections faster than ever before. VisiCalc is the most powerful and easy-to-use projection tool ever developed.

FINANCIAL ANALYST quickly determine rate-of-return under varying assumptions using the built-in net present value functions. VisiCalc will also compute financial ratios, and project tax consequences.

ACCOUNTANTS develop financial statements and pro formas, making changes and comparisons easily with VisiCalc's ultimate "what if" recalculation feature.

TAX ACCOUNTANTS compute the tax effects of many alternatives, and print out all the different scenarios for client discussion and documentation.

ENGINEERS and SCIENTISTS appreciate VisiCalc's transcendental functions, scientific notation, and features like eleven-digit precision in numeric calculations.

MARKETING MANAGERS find VisiCalc is the answer to every forecasting and budgeting need. They refine assumptions — commission rates, sales costs, advertising expenditures, leads, sales closing percentage — and watch the effect on the bottom line.

PRICE: DISK $150.00

TITLE: VISILIST
PUBLISHED BY: COMPUTER STATIONS, INC.

Utility program for financial planners which lists out the grid location and formulas (rather than the calculations) of any file created with VISICALC(TM). This VISICALC(TM) companion product has been well received as a tool for analyzing financial models built with VISICALC(TM).

TITLE: VISICHART
PUBLISHED BY: INTERACTIVE MICROWARE, INC.

A machine-language display subsystem that enables you to view results as they are collected from an instrument, using an analog to digital converter. VisiChart runs on a 48K Apple II with Applesoft ROM.

PRICE: $75

TITLE: VISICALC
PUBLISHED BY: PERSONAL SOFTWARE INC.

101 ways to increase your productivity with VisiCalc™ software.

1. A California sales rep. uses VisiCalc to do his sales reports, sales summaries and expense accounts.
2. A Louisiana shipyard manager does inventory pricing, cost estimating, and stability and tonnage calculations.
3. An Illinois real estate agent projects sales, seller's and buyer's closing costs, and cost differences between buying and selling.
4. A CPA/farmer in California compares budgeted and actual expenditures, analyzes transactions and solves numerous other business problems.
5. A New Hampshire financial analyst, who computes and prints trust fund reports for his clients, says, "VisiCalc is paying for itself over and over. An excellent money maker."
6. A California real estate and financial planner automated much of his work with VisiCals's powerful features. For example, he has created an array of 13 certificates of deposit with varying base amounts, term periods, and interest rates, with associated calculations for required "breakeven" terms and interest rates when current date and available money market rates are entered. Penalties for early withdrawal are applied and gain/loss shown if proceeds reinvested. Daily compounding of interest is provided for.
7. A ceramic tile manufacturer has "new applications all the time," such as securities journal, costing model, budget preparation, ceramic empirical formula calculations and financial analysis. Says, "VisiCalc is dynamite."
8. The vice president of operations for a Colorado company does his budgeting and planning.
9. The inventory control manager for a $60 million-a-year Tennessee marketing company does its inventory control and planning, budgeting and sales forecasting and summaries. He likes VisiCalc's versatility.
10. A professional translator in Texas, using VisiCalc for cost/profitability comparisons, budgeting and income taxes, says VisiCalc is the "best microcomputer application program I've ever seen."
11. A Virginia research scientist keeps weekly budget planning, tax records (income and deductions), medical expenses and personal inventory.
12. An Australian manufacturing firm manager's uses include factory production reports, labor costing, calculation of percent price increases, and "a race horse selection program that is yet only moderately successful."
13. A Swiss retail food store manager uses VisiCalc for profit center calculations, enabling him to know the net profit of every store on a monthly basis with the input of only three reference numbers.
14. A Pennsylvania life insurance agent, who already prepares client proposals combining insurance and other investments and quotations on small group plans, says, "I can't wait until I really learn how to use VisiCalc — It's outstanding."
15. A Utah corporate secretary appreciates VisiCalc's "ease of use" while doing corporate budgeting, sales forecasts, production forecasts, financial report analysis and ratios, and construction cost analysis.
16. A California fast food engineer does his engineering tabulation and bookkeeping.
17. An English business consultant's uses include analyzing key financial ratios and balance of business planning and modeling business performance, and management training.
18. A California engineer does his business plans, balance sheets, cash flow analysis and sales forecasts. Says he likes VisiCalc's "protection from errors and mistakes."
19. An Oregon medical laboratory director does his workload calculations and space forecasting.

20. A New York finance manager does balance sheet forecasting and keeps a five-year income statement.

21. An Illinois teacher likes the built-in formula calculations when doing statistical research, charts, baseball team statistics, classroom grades and home budget projections.

22. A Texas anesthesiologist calculates gas flows on anesthesia equipment, plus a running record of income taxes, pending orders and computer hardware and software expenditures.

23. A South Carolina optician took the hand calculations out of his budgets and sales projections.

24. A senior financial analyst in California does his balance sheet financial analysis (ratios, rates, yields, etc.) and financial modeling such as profit plans.

25. An IRS group manager in Oregon schedules volume analysis and does his tax return and personal financial analysis.

26. The president of a New York retail business is using VisiCalc to figure out how he can pay for his personal computer. (He should talk to the guy mentioned in number 5!)

27. The co-owner of a California restaurant calculates food costs, bar costs and total operation cost projections.

28. A Massachusetts student is crunching numbers at Harvard Business School with VisiCalc ... straight to the head of the class.

29. A Texas businessman has automated his preparation of management information reports: sales, EEOC, inventory, costing standards updating, operating results and production quantities.

30. A Wisconsin business consultant models warehouse layout and operation for peak efficiency, analyzes investments and return rates, and develops budgets.

31. A Hawaiian businessman likes VisiCalc's versatility, reflected in his many uses: vehicle operating costs, taxes, stock portfolio analysis and updates, budgeting, financial analysis and updating price lists.

32. An Illinois golf course pro and supervisor uses VisiCalc for payroll, pro shop sales and revenue, meeting room scheduling, club prices and work schedule, saying, "It is the best program I have."

33. A Michigan real estate developer analyzes building and land development costs, cash flow, budgets and other projections. He notes that the instruction manual is "fantastic."

34. A California engineer says, "VisiCalc is a truly great package for us non-programmers." He uses it for cash flow and income analysis, family monthly expense journals, income tax forms, personal inventory and other data bases, all with the "ability to generate reports and analysis in plain English."

35. An Ohio technical sales rep. manages his $4 million sales territory, tracks time allocation and business trends, and plans his personal budget.

36. A commodity broker in California computerized his commission schedule, quick assets and financial statement calculations.

37. A Pennsylvania marketing exec. likes the speed and math manipulation capabilties of VisiCalc for his five-year plan and product/market forecasts.

38. A Kansas real estate salesman does real estate financial analysis, merging recaps from several files into a larger analysis program.

39. An accountant in England applies VisiCalc to plan vs. actual calculations, financial models and management sciences (e.g. queueing theory). He likes the fast calculation and easy-to-learn features.

40. The national marketing manager of a California company says, "VisiCalc is the best software I've ever used," and does so for sales and inventory projections and commission claculations.

41. A Texas medical research technician does statistical data processing at work and checkbook and tax return calculations at home.

42. A marketing executive in Holland uses it for research applications.

43. A Florida sporting goods retailer uses it for business, economics and statistic.
44. A South Carolina chemist calculates his chemical formulas.
45. A West Virginia Air National Guard pilot keeps his persoanl budget and checkbook records on VisiCalc.
46. A Norwegian small businessman forecasts cash flow and calculates time management.
47. A New York insurance/finance consultant using VisiCalc in his work, says, "I am extremely impressed with its capability, flexibility and orderly presentation of instructions, particularly for one who is not prepared to invest the time needed to learn the ABC's of programming and computer operation."
48. A Rhode Island builder has automated his cost analysis.
49. The president of a Massachusetts company uses VisiCalc for "forecasting, planning and having fun."
50. A chemical engineer in Guatamala lets VisiCalc do his budgeting.
51. An Illinois artist has put all of his personal accounting and financial record-keeping on computer.
52. An Illinois savings and loan president does budgeting, financial modeling, cash flow projections and "anything I can think of."
53. A Montana engineer uses VisiCalc for managerial problem-solving.
54. A Colorado wholesale distributor tallies and tracks distributor sales and projections for growth.
55. A Texas dentist does his accounting, day sheet, checkbook and income tax.
56. The vice president of a Mexican engineering firm does forecasting, inventory tracking and budgeting.
57. An Alaskan oil field engineer has automated his forecasting and planning.
58. A Washington restaurant manager does his inventory, extensions and sales analysis.
59. The associate director of a major Wisconsin-based farm implement manufacturer keeps salary, administration, project planning and budget preparation on VisiCalc.
60. A U.S. Dept. of Labor economist does simple regression analysis leading and lagging the independent variables.
61. An executive of a major U.S. management consulting firm explains how they had used an expensive time-sharing service which tied up a programmer/analyst to create and run the models, so there was always someone between their needs and the final results. "We attempted to duplicate what we had at the service bureau and surprised ourselves that we could do it easily and without specialized programming skills. Now we have evolved far more sophisticated forecasting and modeling tools that go well beyond anything we originally envisaged. These analyses are used by us on behalf of our clients or prospective clients and they help us get more business."
62. The president of a California brewery does his business projections and production formulations.
63. A U.S. Coast Guard officer stationed in Hawaii forecasts Coast Guard resources and does his personal budget.
64. An Illinois advertising director does projections, departmental budgets and forecasts.
65. A Missouri accountant does his tax planning, budgeting, job cost estimating and economic forecasting.
66 .A Kentucky police officer has put his family budget on VisiCalc.
67. The president of a Georgia investment consulting firm does investment and economic manipulations.
68. The assistant vice president of a California bank does internal forecasting.
69. A Minnesota civil engineer does structural design and real estate analysis.
70. The manager of facilities engineering for a major North Carolina furniture

manufacturing corporation monitors a corporate energy program and does scheduling and financial projections.

71. A Tennessee general contractor does cash flow projections, budgeting and portfolio management.

72. The circulation department manager of an Illinois university keeps weekly, monthly and yearly book circulation statistics.

73. A California management cosntultant says, "The VisiCalc documentation struck me the first day I had my computer. I found that by following the book I learned - really learned - what I need to know to do what I wanted. In the months that I have used VisiCalc I have not been disappointed. It has worked like a champ. I have decided not to spend my money or any software that does not have neat, clear and understandable documentation. VisiCalc will probably be the standard by which I measure future purchases."

74. An Ohio aeronautical engineering program manager tracks the finances of contracts and his home budget.

75. An airline passenger service agent in Indiana does his budget and taxes.

76. A Canadian pharmaceuticals quality control manager does analytical efficiencies.

77. The president of an Oklahoma computer company does financial modeling and analysis.

78. A Michigan cattle rancher does "quite a bit of work sheet record-keeping."

79. A Louisiana lawyer does bookkeeping and manages other data files.

80. A Kansas electronics supervisor uses VisiCalc for cost analysis and scheduling.

81. A landscaper in Oregon has automated his bid calculations, job costing and labor management.

82. A California computer store owner uses VisiCalc to increase sales of personal computers.

83. The chief executive officer of a Pennsylvania coal mining company does his financial business accounting.

84. A senior program analyst for the U.S. Dept. of Energy plans budgets and monitors contracts.

85. A California physican keeps track of the daily patient census and nursing staffing patterns "so that immediate managerial decisions can be made. It is extremely easy to set up."

86. A Texas senior systems engineer bought a personal computer and VisiCalc to keep track of his expenses and home budget.

87. A Delaware portfolio manager does his stock analysis and management with VisiCalc.

88. A Virginia software engineer with 10 years experience as a programmer/analyst uses VisiCalc for stock market analysis and bookkeeping, saying, "I'm very impressed with the quantity of the program and the capabilities it provides. Even though the program is complex, it is easy to use because commands act just as you expect them to. Thank you for helping to justify my investment in a personal computer."

89. The president of a Utah retail firm uses VisiCalc to do pro formas and "to hit" scores for Dungeons and Dragons.

90. An Airzona educational training specialist does project costing, market analysis/penetration and P&L statements.

91. A Costa Rican electrical engineer has financial, statistical and many more applications.

92. A New Hampshire programmer uses VisiCalc for his home finances.

93. An Illinois executive pilot does operating cost projections for various aircraft.

94. A Texas CPA for a large public accounting firm writes: "I am using VisiCalc for financial planning models, project planning and other situations where I would otherwise use a columnar work sheet. Congratulations on having one of

the most sophisticated and useful personal computer products I have seen over many years of working on the data processing area."

95. A Connecticut film producer applies VisiCalc to film production inventory-keeping and insurance analysis.

96. A New Jersey architect does business accounting.

97. An advertising sales manager in the same state calculates the effect of changing advertising media buys.

98. A New York TV director of research calculates rating trends, averages, and cumulative audiences.

99. An Arizona research psychologist analyzes data formats, personal finances and investments.

100. The sales VP of a California personal computer manufacturer uses VisiCalc to analyze sales quotas and performance.

101. The president of a North Carolina business forms company writes: "We cannot express our excitement over the power available to us through VisiCalc. My biggest frustration at the moment is deciding which application I am going to put on the program next. We are currently using it for personal company budgets, cash expenditure tracking, customer inventory and operations analysis. VisiCalc is without a doubt the most powerful program ... on the market today. We would recommend that everyone purchase VisiCalc."

He took the words right of our mouth ...

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BUSINESS SECTION 2

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TITLE: THE ANALYZER
PUBLISHED BY: DAKIN5 CORPORATION

You've automated your business with The Controller. The Analyzer carries on the tradition of providing you with more business information at a minimal cost of time and effort.

Whether you purchased your Controller and Apple™ computer last week or last year, when you run all your reports and close this month, will you spend a considerable amount of time analyzing all the data you receive from General Ledger, Accounts Receivable and Accounts Payable?

The Analyzer provides immediate answers to such essential questions as: How effectively are my resources being used? What is my estimated cash flow for the next four months? How does my Profit and Loss for this quarter compare with the same quarter last year?, and What percentage of all my assets does my inventory represent in comparison with last year at this time?

The Balance Sheet Analysis Report, using the total assets of your company as the base, presents you with two different types of reports. One type shows the dollar variance of this year with last year. The other type indicates the percentages of your company's individual assets, liabilities and equities for the two years as compared to its total assets.

Depending upon the option you chose, you will be provided with this year and last year's comparative figures for the current month, current quarter, and year-to-date.

The Profit and Loss Analysis Report, with revenue as its base, also supplies you with dollar variance and percentage reports. One option even permits departmentalized reporting. You are shown two year comparative data for the current month, current quarter, and year-to-date.

The Budget Analysis Report shows in the current month, year-to-date, and future months your projected budgeting figures, the actual figures, and the degree of variation. You may also print this report by departments.

The Sources and Applications of Funds Report reconstructs in summary form the transactions that cause the balance sheet changes from the past year to the present.

The Financial Ratio Analysis Report provides a measure of your ability to meet short term obligations, the extent to which your company is financed by debt, management's overall effectiveness, and determines how effectively your resources are being used.

The Cash Flow Projection Report furnishes you with the information required to adequately plan a cash budget. This includes at the end of each month, and for four future months, a projection of your cash surplus.

The above programs (and all others in The Analyzer) are selected from menus, as in The Controller. You'll find that you experience no period of adjustment even the very first time you use The Analyzer with The Controller. The reason is simple: they were both designed and written by Dakin5 Corporation.

The Controller and The Analyzer are registered trademarks of Dakin5 Corporation. Apple is a registered trademark of Apple Computer Inc.

PRICE: $625

TITLE: APPLEGRAPH
PUBLISHED BY: BUSINESS & PROFESSIONAL SOFTWARE, INC.

For use with Apple Computer Systems. AppleGraph is a high-quality microcomputer software package for general purpose plotting of data in a variety of formats for use by the business, professional, and research decision maker.
AppleGraph yields high-resolution, multicolor graphics for video display and hardcopy output. Featured are pie charts generated separately or bar graphs, area plots, points, and solid or dashed lines produced in any combination of overlays.
AppleGraph features *easy-to-use* English language commands, making it readily accessible to those unfamiliar with computers, as well as those who wish to add to their selection of decision-making tools.
Commands may be entered interactively or in advance for automatic presentation of an entire data analysis complete with mathematical manipulation, curvefitting, smoothing, and simple statistics. Data may be entered directly or supplied from other programs.
AppleGraph's many applications include: • a forecasting tool for business and professional decision makers • a teaching aid for educators • a data analysis tool for researchers • a visual aid for presentations.
AppleGraph will be available in January 1981.

TITLE: INVENTORY CONTROL
PUBLISHED BY: MICRO BUSINESS WORLD

The program will handle up to 8100 items, has a transaction register and audit trails. In addition, it will generate inventory status reports, reorder parts and keep track of purchase orders automatically.
The program may be used in a retail or wholesale environment, will handle multiple departments or divisions, has fact data retrieval, and can be learned in less than two hours, the company said.
Minimum hardware requirements are an Apple II Plus with 48K, one disk drive and an 80-column printer.
PRICE: $99, including a comprehensive manual

TITLE: THE LIFE INSURANCE CLIENT MANAGEMENT SYSTEM
PUBLISHED BY: LIFE PLAN ANALYSTS

A Turnkey Data Base System designed by a Life Insurance Professional FOR Life Insurance Professionals — SAVES 2 to 5 Hours Monthly!
ALLOWS YOU TO:
- Add Clients
- See Client Info on monitor
- Print out all clients
- Print out by month of birth
- Print out by zip code
- Correct records
- Delete Records
- Print mail Labels for all clients
- Print mail labels by month of birth
- Print mail labels by zip code
- Build new files

REQUIRES APPLESOFT 1 DISK II, 48K.
Supplied with one program disk and two initialized client storage diskettes. When ordering, indicate slot # for printer.
PRICE: $85.00

TITLE: THE ORDER SCHEDULES (TM)
PUBLISHED BY: HIGH TECHNOLOGY, INC.

Compatible with The Store Manager(TM).
Automatically maintains up-to-date purchase order information including total quantities of items on order, shipping schedule, total number of items to be shipped on the scheduled date and the backorder quantity.
Produces several reports, some of which will utilize the inventory file information from The Store Manager.
PRICE: $150.00

TITLE: PROGRAMS FOR PUBLISHERS
PUBLISHED BY: SBC—PFP

Reader Service Package processes bingo cards to produce sales-lead labels and summary reports.
The package is written to run on APPLE micro-computers.
Inquiries from publishers, dealers and systems integrators are invited.

TITLE: PROFESSIONAL TIME AND BILLING
PUBLISHED BY: SOFTWARE TECHNOLOGY for COMPUTERS (STC)

2 disk drive program written in assembly language and applesoft II completely menu-driven. Maintain all billing of clients and personnel. Generates Statements. Numerous reports based on all types of criteria. Easy data entry for rates, clients, and matters. Has search, sort, charge (On-screen editing), view and balance forward. If you are a job contractor, attorney, accountant, general consultant, or any one that needs to charge or account for time, this program is a must. Complete turnkey operation. Numerous reports are produced to aid in the time analysis process. Holds 120 employees & up to 300 clients with a max of 1600 transactions per period. All this and much more.
Requires 48K and Applesoft II on ROM (or Apple II Plus). Accommodates serial 1 parallel 132 column printer. Error protection devices provided. Program diskette and instruction manual.
PRICE: $325.00
MAILING LIST PROGRAM — Print labels sorted or searched by 6 fields. On-screen editing. Line up routine.
PRICE: $40.00

TITLE: PROJECT SCHEDULE ANALYSIS I
PUBLISHED BY: EXPRESS MARKETING

A cassette-based introduction to computer-aided scheduling for the Apple II computers with floating point Basic and at least 16K of memory. PSA/1 uses critical-path scheduling techniques similar to those used by NASA for the U.S. space program.
PSA/1 computes schedules for each job within a project; these schedules show how early each job can be started, how early it can be finished and the latest each job can be started and finished and still meet a project deadline. Schedules also show how long each job can be delayed without affecting other jobs. Once defined, projects can be named and their data stored on tape for later analysis. Flexibility is enhanced by allowing you to specify any time unit (hours, days, weeks) desired for tracking the project.
Schedule results are displayed on the video monitor, and printed reports can be produced if you have a line printer capable of printing 80 columns or more. Apple owners must provide their own printer driver routines at locations indicated in the software.

The accompanying User Manual provides over 50 pages of information including how to define project networks, how to make time estimates and how to operate each of the six functions in the PSA/1 to such applications as building a house, planning a new product and preparing a gourmet dinner.
The PSA/1 package consists of the program cassette and User Manual. Specify the TRS-80 or Apple II version.
PRICE: $25

TITLE: THE STORE MANAGER (TM)
PUBLISHED BY: HIGH TECHNOLOGY, INC.

High Technology is re-introducing The Cashier (TM() formerly marketed by Apple Computer, Inc., under the new title The Store Manager.
The Store Manager is available exclusively from High Technology and is being offered at better dealer margins than ever with discounts up to 50% from suggested retail!
The Store Manager is a point of sale system which also provides real time inventory control.
Produces purchase orders, receiving reports, invoices, packing slips and quotations.
Maintains up-to-the-minute sales totals and generates inventory management reports.
In effect, it is a package which manages the sales and product flow of a small business
PRICE: $250.00

TITLE: TAX-MANAGER™
PUBLISHED BY: TASO

STANDARD FEATURES
Tax-Manager is an integrated tax management system for individuals that helps you reduce your tax liability. It is three interactive modules that work together to give you a complete tax management system.
Tax-Manager allows you to easily enter your tax data for Form 1040 and related schedules (A, B, C, D, E, G, & TC). Your tax liability is accurately calculated using the correct tax table or rate schedule.
Looking for more tax deductions? Using a data base of over 800 items. Tax-Manager helps you find those hidden deductions. Simply enter a questionable

item and Tax—Manager quickly tells you if it is deductible. Or you can review the entire list by category.
Confused about which tax forms and schedules you should be using? Let Tax-Manager help you. By answering a series of simple questions, Tax-Manager determines which forms and schedules are appropriate for your situation.
COMPARE OTHER SYSTEMS
Why buy a system that only does math calculations and computes your tax? Why buy a system that does not help you reduce your tax liability?
We offer a unique system that meets your needs now and will continue to meet them in the furture. When tax regulations change, so will Tax-Manager. You will be provided with yearly updates for a nominal cost.
We backup Tax-Manager with a staff of professionals, including CPA's, computer specialists and tax consultants, who use their expertise to help you reduce your taxes. Most importantly, we provide documentation to educate you in how to best obtain the system's maximum potential.

TITLE: TAX PLANNER

Tax Planner — an innovative program designed for use with Apple II and II Plus computers — allows you to determine the federal income tax advantages or liabilities that result from personal financial decisions. It provides you with the capability to construct various income scenarios, and then compare the federal income tax impact of each. Additionally, Tax Planner instantly computes the financial consequences of income-affecting decisions for up to nine years in the future. This means you can determine the best time to make a financial move (for example, sell property or take losses on investments). And you can print out your tax strategies, or store them on diskettes, ready for fast retrieval and modification.
Tax Planner — the tool that can help you better manage your personal income and the tax mechanisms that affect it.
TAX PLANNER...
• Provides you with the capability to optimize the federal income tax advantages available to you, because it lets you quickly compare the tax consequences of various financial decisions ...
• Assists you in choosing the best time to make certain financial moves, by instantly computing their impact on income taxes in current and future years ...
• Helps clarify current federal tax regulations, because you can experiment with various financial scenarios and observe how tax mechanisms apply to each ...
• Increases your productivity, by allowing you to quickly develop or change tax strategies.
Tax Planner's main menu consists of four options. To begin using the program, select TAX PLANNING. Before tax computations can be performed, you will be asked to provide some information, including how far into the future you wish to plan (up to nine years), and your taxable income for each of the four preceding years. If you choose to plan only for next year, you may specify the number of alternative scenarios to be examined for that year. After you've provided this information, your screen will display the Tax Matrix, a skeletal list of items which affect your federal income tax situation. These include your tax filing status, long- and short-term capital gains, income, deductions, and adjustments.
Suppose your base year is 1980 and you wish to do some planning for 1981 and 1982. On the screen, the matrix will display three columns labeled 1980, 1981, and 1982. Tax Planner will automatically compute your adjusted gross income, your estimated tax, and your tax bracket, once you've filled in the information above "ADJ GROSS INC."
Setting up your matrix usually requires some time and careful thought. But once it's complete, Tax Planner does all the rest of the work — the tedious tax

calculations — for you. To compute your adjusted gross income, taxable income, taxes, and other figures, just press the "C" (for "compute") key. Tax Planner automatically computes your tax by income averaging as well as by the regular method. It also computes the maximum tax on personal service income, the minimum tax on preference items, and the alternative minimum tax. In addition, your tax bracket and the tax computation method most advantageous to you are determined for each year or financial scenario.

You can create a matrix with as many as nine columns, each containing alternative sets of tax data for a single year. Although the screen displays only three columns at a time, up to nine can be stored within any single scenario. (The above example, for instance, could have included up to six additional years — in all, a tax strategy for 1980 through 1988.) The additional columns are moved, or "scrolled," on and off the screen, simply by pressing the left or right cursor movement keys.

With Tax Planner, you can use a matrix to quickly perform "what if" experiments that otherwise would consume hours of tedious calculations. Suppose, for instance, that you're thinking about selling your home, and you wonder if it would be more advantageous in tax savings to sell it this year rather than next. Simply include the expected sale price in this and next year's cell, letting Tax Planner compute the results in each case. A quick comparison will reveal the more advantageous timing for the sale.

Once you've developed a tax scenario you want to keep, save it on your diskette by selecting FILE CLERK from the main menu, and following the step-by-step instructions displayed on your monitor. Or choose the PRINTER option to set your printing parameters and print out the strategy.

Because Tax Planner incorporates the current federal tax laws, you can be assured of the validity of its computational results. In addition, if you fill out and mail the user registration card that accompanies the program, Apple Computer Inc. will keep you informed of any product changes corresponding to tax law revisions.

Whether you're a financial advisor who wants to bring the latest technology to bear on your client's tax situations, or an individual with substantial opportunities for advantageous tax treatment of income, you'll find that Tax Planner will become an indispensable tool for quickly generating dollar-saving financial strategies.

To use the Tax Planner, you will need:

- Apple II or Apple II Plus, with a minimum 48K of memory;
- Apple Disk II with controller and 16-sector PROMs;
- Video monitor or television;
- Printer and interface card (optional);

Note: Apple Computer systems work with several printers and appropriate interface cards, including the following:

Apple Silentype Printer
Card: Silentype Interface Card (supplied with printer)
Qume Sprint 5/45
Card: High Speed Serial Interface Card (Apple Product A2B0005)
Printer IIA (Centronics)
Card: Centronics 779 Printer Interface Card (Apple Product A2B0007, included if printer is purchased from Apple Computer Inc.)

CASES/DESKS, ETC.

Apple Case CS-1
Apple Locker & Accessories CS-2
Apple Locker CS-2
Apple Sack CS-2
Covers CS-2
Computer Furniture CS-2
Small Apple Case CS-3
Large Apple Case CS-3
Apple With Monitor Case CS-3
Carrying Cases CS-3
Cash Drawer CS-3
Vinyl Carrying Case CS-3
Wrapple Vinyl Disk Cover CS-3



TITLE: APPLE LOCKER & ACCESSORIES
PUBLISHED BY: TELE-TERMINALS

APPLE CART
Heavy duty metal with casters. 24" w. x 23¼" d. x 37¾ h. with optional 32" w. table top ($16.00 extra).
PRICE: $180.00

TITLE: APPLE LOCKER

A security locking device, with locks, connectors, cables, and full installation instructions.
PRICE: $78.50

TITLE: APPLE SACK

Transport your APPLE, one or two disk drives, accesories, cables and diskettes all in this soft vinyl bag.
PRICE: $98.00

TITLE: COVERS
PUBLISHED BY: SOUTHCOAST PRODUCTS
Clear Plexiglass Lid for the Apple Computer
PRICE: $24.95

Apple Computer Cover (tan, brown, blue, navy or silver)
PRICE: $8.95

Apple Disk Drive Cover (tan, brown, blue or navy)
PRICE: $3.95

Centronics 779 Printer Cover (tan, brown, blue, navy or silver)
PRICE: $12.95

TITLE: COMPUTER FURNITURE
PUBLISHED BY: ELECTRONIC SYSTEMS FURNITURE COMPANY

CHOOSE AN APPLE DESK. A compact bi-level desk ideal for an Apple computer system. This 42" x 31½" desk comes with a shelf to hold two Apple disk drives. The top shelf for your TV or monitor and manuals can also have an optional paper slot to accommodate a printer.
CHOOSE A MICRO DESK. Get your micro computer off the desk top and into the micro shelf under our Designer Series desks. Suitable for the North Star, Dynabyte, Vector Graphics, and Altos computers. The desks come in a variety of sizes and colors.
CHOOSE A MINI RACK. Mini racks and mini micro racks have standard venting, cable cut outs and adjustable RETMA rails. Choose a stand alone bay or a 48", 60", or 72" desk model in a variety of colors and wood tones. A custom rack is available for the Cromemco.
CHOOSE A PRINTER STAND. The Universal printer stand fits the: Centronics 700's, Dec LA 34, NEC Spinwriter, Lear Siegler 300's, Diablo 1600's & 2300's, T.I. 810 & 820, Okidata Slimline, Anadex 9500's

TITLE: APPLE CASE
PUBLISHED BY: COMPUTER CASE COMPANY

This attache style case has been designed specifically to hold the APPLE computer along with a disc drive or tape recorder in a fully operational configuration. No need to disconnect and reconnect cables each time the computer is moved. Simply plug in the power cable and connect the monitor and you are in business. The removable top has storage space for manuals, discs, tapes, working papers, and other necessities. An elastic strap in the base provides handy storage for floppy discs or tapes. The computer and disc drive (or tape recorder) are held in position with security straps and cradled in foam rubber for protection when operating, transporting, or in storage.

The case provides not only portability but a convenient method of storage free from possible damage and dust accumulation. By replacing and locking the lid, your valuable computer and software are protected from unauthorized use and tampering. You can easily control access without dismantling the setup. Delicate cables are protected from possible inadvertent damage or fatigue failure due to repeated connecting and disconnecting.

Whether you are interested in transporting your APPLE computer to and from the office, carrying it as luggage on the airlines, providing temporary storage while your desk is being used for other things, or simply for security and dust protection, the APPLE CASE is an invaluable accessory for your computer.

PORTABILITY: You APPLE can be carried, then operated without removal from the case.
QUALITY: Made from the best luggage construction material.
PRICE:
SMALL APPLE CASE: This case will hold the Apple computer plus one disk drive or tape recorder, disks or tapes, manuals and all associated hardware and cables in a fully operational configuration. (23" x 19" x 6.75)
..... $109.00
LARGE APPLE CASE: This case is identical to the one described above except provisions are made to hold a second disk drive. This is accommodated by making the lid one inch deeper and removing the small pocket in the lid. The second disk drive sits on top of the first with the hold-down strap going around both units. An additional protective pad is placed in the lid to provide protection when it is being carried. (23" x 19" x 8")
..... $119.00
APPLE WITH MONITOR CASE: This case will hold a nine inch monitor in addition to the apple computer and two disk drives. The monitor sits on the right side of the computer padded with foam rubber and held into postion with a secutiry strap. The two disk drives are mounted on top of the computer and also held with a strap. A portfolio in the lid will hold manuals and working papers and provisions are provided to hold two boxes of disks. (25" x 19½" x 9¾")
..... $129.00

TITLE: CARRYING CASES
PUBLISHED BY: COMPUTER TEXTILE, INC.

The Apple case has room for the Apple computer, 9" Sanyo monitor, two disk drives, power strip, two boxes of diskettes and manuals. It measures 20" x 21½" x 10½".
PRICE: $179

TITLE: CASH DRAWER
PUBLISHED BY: COMPUTER FORUM

All steel, baked enamel finish, with drawer release key-lock. Removable plastic money tray has 5 coin and 5 bill compartments. Just plug into 110V outlet and plug interface into computer. Software controllable, full instructions. Size: 16.5"W x 17.7"L x 4.4"h. Use with CASHMASTER system.
PRICE: $200.00

TITLE: VINYL CARRYING CASE
PUBLISHED BY: APPLE COMPUTER

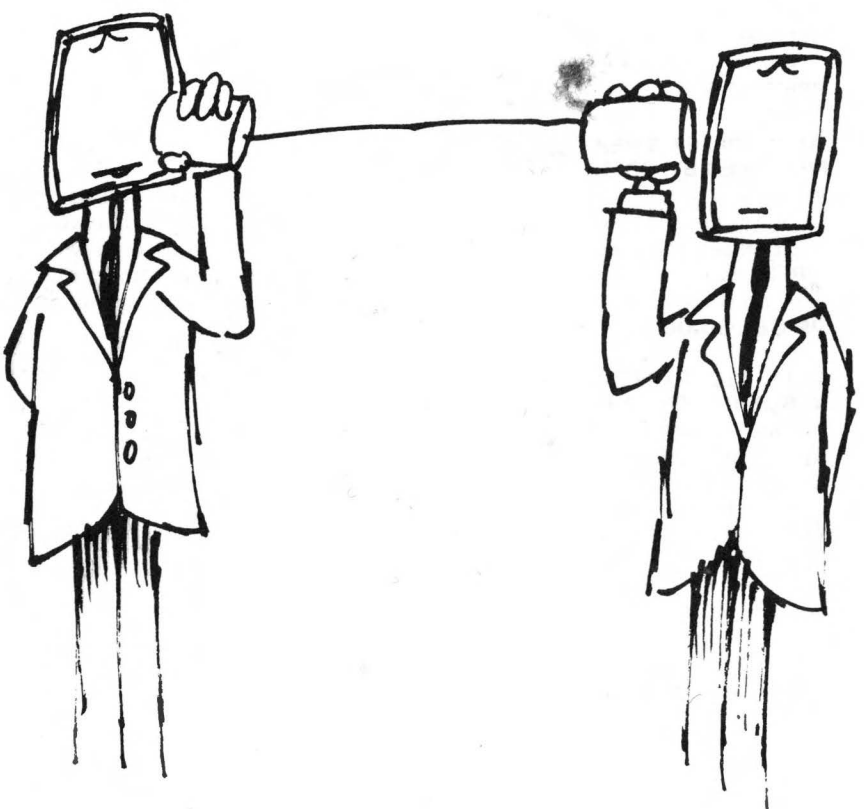
Room for the computer and all the cables. Padded. Heavy-duty vinyl with an Apple logo embossed on the top. Fits under an airline seat.
PRICE: $30.00

TITLE: WRAPPLE VINYL DISK COVER
PUBLISHED BY: HENWOOD ENTERPRISES

Problems can arise when excessive dust or liquids are allowed to enter the keyboard. This attractive and inexpensive slip-over cover will protect your Apple II when it is not in use. "Put a WRAPPLE on your APPLE."
PRICE: $8.95

COMMUNICATIONS

Apple Bulletin Board System C-1
Apple Lis'ner C-1
ASCII Express II C-1
Basic Interactive Terminal Software (B.I.T.S.) C-2
Communications Package C-3
Com-Pak C-4
Data Capture 4.0 ..... C-4
Graph C-5
Giant Letter C-5
Intelligent Keypunch C-6
Messages C-6
Multi-Message Ad C-6
Pascal Utility Micromodem Package (PUMP) C-7
Satallite Tracking Software C-7
Super Message C-8
The Autodialer II C-9
The Ultimate Transfer C-9
Variable Message C-9
Video Marquee C-9
Slide Maker C-9
Video Message Display C-9
VT100 Emulator C-10



TITLE: APPLE BULLETIN BOARD SYSTEM/ABBS
PUBLISHED BY: MICRO SOFTWARE

The Apple Bulletin Board System (ABBS) is an Applesoft II program that implements a personal computer based message storage and retrieval system on a 32K or larger Apple II computer. The system is configured to automatically answer incoming phone calls through the use of a D.C. Hayes Micromodem II. Once it has answered the phone, the program determines the transmission speed of the terminal or computer on the other end. After providing some information about himself to the system, the caller can then review and/or leave messages on the bulletin board. After completing his session with the system, the caller signs off, at which time the system hangs up the phone to await another call.

The Apple Bulletin Board System is modeled after the Computerized Bulletin Board System (CBBS) developed by Ward Christensen and Randy Suess. Their original implementation is extensively described in the November 1978 issue of Byte Magazine. Most of the functions that they have implemented in their system are implemented in ABBS. In addition, we have added a number of changes to take advantage of certain unique characteristics of the Apple II - D.C. Hayes Micromodem II combination.

Minimum system configuration is:

Apple II computer with at least 32K RAM Memory.
Applesoft II ROM card.
Disk II Subsystem.
Printer.
D.C. Hayes Micromodem II

Optional Equipment Supported:

Mountain Hardware Clock Board.

PRICE: 52.00

TITLE: APPLE LIS'NER
PUBLISHED BY: SOFTAPE

Allows you to communicate with the Apple computer via spoken words. By using your own cassette recorder and microphone, it will listen for the words and phrases it has learned and respond under program control. Comes with a 'PRFIX' program and all documentation. Occupies less than 1 K of memory for a 31 word vocabulary and is compatible with the Appletalker program.

PRICE: 50.00

TITLE: ASCII EXPRESS II
PUBLISHED BY: SOUTHWESTERN DATA SYSTEMS

The ASCII EXPRESS is the most complete, intelligent terminal package for the Apple II. It is fully compatable with the D.C. Hayes Micromoden II and the Apple Communications Card. It fully supports upper/lower case text both from the Apple II keyboard as well as its display.

With this package your Apple can talk to just about anything that has dialup ac-

cess, from another Apple II to mainframe systems! It features file oriented upload/download facilities, a built in line editor with full editing functions as well as support for your printer and keyboard macros in the terminal routine.
Also included are support programs to help you convert Apple II programs, (Applesoft, Integer and binary) to their file form. Fast machine language "crunching" is used to compress program files to their minimum size to save online time.
FEATURES:
Autodial and answer capabilities when used with the D.C. Hayes Micromodem II.
Full upper/lower case text, keyboard and display!
Programmable keyboard macros reduce complicated log-in procedures to a few simple keystrokes. A must for optimal use of online time.
Files can be transferred to or from any type of system, personal or mainframe.
Special Copy Mode records anything displayed on the screen into your user file.
Can accommodate approximately 20K of data in memory. Stores and retrieves files from disk.
LINE EDITOR:
Fully upper/lower case, 10 to 25 columns, visible control characters.
Insert and Delete functions for blocks of data within file.
Individual line editing: replace, insert, delete, append to beginning or end of lines, auto centering.
Disk file handling allows load/save of new file or appending data onto existing files either in memory or on disk.
System requirements: 48K Apple II, disk w/FP ROM or language card. Lower case display board recommended.
PRICE: $59.95 on Disk with manual (Calif. Res[redacted] 6%)

TITLE: BASIC INTERACTIVE TERMINAL SOFTWARE (B.I.T.S.)
PUBLISHED BY: MICRO SOFTWARE

The B.I.T.S. package allows you to use your Apple II* and your D.C. Hayes Micromodem II or Apple Comm Care/Modem as a very intelligent terminal that can communicate with other systems over the telephone line at 110 or 300 baud ASCII.
While you are connected to the other system, the software maintains a large copy buffer. (32K in a 48K system). You can at any time copy all data going thru the modem into the copy buffer, and then store it out to disk as a standard TEXT file.
A 32K buffer is capable of holding about 20 typewritten pages of data. Files larger than 32K can often be transferred a piece at a time by pausing the output to the other system, (usually with a Control - S), saving the buffer, and restarting transmission.
At any time, you can transfer any text file on your disk to the other system. Provision is made for transferring a character at a time for slow systems, or a line at a time for packet switching networks. Provision is also made for handling systems that send back input prompt characters.
FEATURE SUMMARY:
Applesoft autodial program including a program to maintain the auto dial library. The current list of active A.B.B.S. systems is supplied as the initial autodial library.
System support programs to convert Integer, Applesoft and Machine Language

programs into TEXT files. Also included is a fast file print, and space compression programs.
File transmit capability.
Large Copy buffer. Buffer commands include:
Copy on, Copy off, Save buffer, Clear buffer.
Full/Half duplex and 110/300 baud operation.
Leave and return to program without losing connection.
Line formatting, to prevent words from being broken between line on the screen.
This package was written as a Machine Language program, with BASIC initialization routines for speed and flexability, and has been tested extensively on systems ranging from the Apple Bulletin Board System thru large timesharing networks such as the SOURCE.

PRICE: 34.95

TITLE: COMMUNICATIONS PACKAGE
PUBLISHED BY: C.H. GALFO

This complete package contains the most sophisticated and versatile radio communications software available for any microcomputer system to date. It allows your Apple II to communicate in any of three codes: Morse, Baudet, or ASCII, with a minimum amount of external hardware required. The program resides in less than 4K of memory and consists of a 2K BASIC executive and a 1.5K set of machine code utilities which handle all realtime tasks such as display, code conversion and I/O. Some features include:

*Live keyboard-Text can be prepared for transmission while either receiving or transmitting.

*3 field display-Text is placed on the screen in any of 3 fields which all scroll separately.

Received text is formatted for a 16 line display. Text is being prepared for transmission is shown a 5 line field; text being transmitted is shown in a one line field.

*Variable size text buffer-This means you can prepare a lot of text and not run out of memory. The buffer space available is about 2.5K (characters) for an 8K system, 10.5K for a 16K system.

*User-defined text strings (stored messages)-Memory not used for the text buffer is allocated to stored messages. Any number of messages can be defined. Since their definitions appear in the BASIC language program, they are easily modified and saved on tape as part of the program.

*Stored text can be inserted anywhere in the text you prepared-This feature can eliminate a lot of repetitive typing during a QSO. Let your computer fill in the details while you continue to type.

*Automatic 72 character line formatting (on RTTY)-You don't have to worry about putting in a CR,LF for the other guy's printer. Word wrap-around is used so that short words are not split at the end of a line.

*Eight special control functions allow complete control of your transceiver, program modes, transmit speed and aid in minor editing of your text.

*Code speeds are continuously variable over a wide range-CW receive is adaptive over a 3 to 1 range.

*Automatic CW identification-Your station call can be sent in CW automatically at the end of a RTTY transmission.

*Hardware required-Signals received off-the-air must be demodulated using the usual hardware required for RTTY operation. For CW, a sample circuit is included in the documentation. The computer output can be used to directly modulate a CW or FSK keying circuit. I/O is all via the on-board (same) connector. Four separate lines are used for RTTY and CW in and out. There is an output to control the T/R line of your station.
PRICE: 18.00

TITLE: COM-PAK
PUBLISHED BY: APPLE VALLEY SOFTWARE INC.

Tired of peeking & poking your micro-Modem II. Try AVS Com-Pak. AVS Com-Pak is a comprehensive communications package interfacing an APPLE II Computer and a D. C. HAYES MICRO—MODEM II. The program is designed to be a general utility for the user who needs communications in his application, but doesn't have the time to become a communications expert.
COM-PAK includes the following features: Change Modem Configuration, Dial-Out, Set Up For A Remote Terminal, Turn ON Carrier (Orig. or Dest.), Go Voice, Enter Half or Full Duplex Terminal Mode, Send or Receive A Text File, Receive A Text File From A Foreign System, Hang Up.
Added features with PASCAL version: Supports Lower Case Dan Paymar Chip, Has Options to send all Received or Transmitted Lines to either Disk (as Text File) or to Printer, Permits External Terminal in Slot #3.
Requires APPLE II with DOS and one DISK II.

TITLE: DATA CAPTURE 4.0
PUBLISHED BY: SOUTHEASTERN SOFTWARE

The most advanced and easiest to use telecommunications program for use with the MICROMODEM II™ or the Apple COMMUNICATIONS CARD™.
Q. Will DATA CAPTURE 4.0 work with my Communications Card™ and a modem?
A. It makes using the Comm. Card almost as easy as using the Micromodem II.
Q. Do I need an extra editor to prepare text for transmission to another computer?
A. No. DATA CAPTURE 4.0 gives you control of the text buffer. You can use DATA CAPTURE 4.0 to create text.
Q. Can I edit the text I have prepared?
A. Yes. You can insert lines or delete any lines from the text.
Q. How about text I have captured. Can I edit that?
A. As easily as the text you have prepared yourself. You can delete any lines you don't want to print or save to a disk file. You can also insert lines into the text.
Q. Just how much text can I capture with DATA CAPTURE 4.0?
A. If the system which you are communicating accepts a stop character, most use a Control S, you can capture an unlimited amount of text.
Q. How does that work? And do I have to keep an eye on how much I have already captured?
A. When the text buffer is full the stop character is output to the other system. Then DATA CAPTURE 4.0 writes what has been captured up to that point to a disk file. This is done automatically.
Q. Then what happens?
A. Control is returned to you and you can send the start character to the other system. This generally requires pressing any key, the RETURN key or a Control Q.

Q. Are upper and lower case supported if I have a Lower Case Adapter?
A. Yes. If you don't have the adapter an upper case only version is also provided on the diskette.
Q. Do I need to have my printer card or Micromodem II™ or Communications Card™ in any special slot?
A. No. All this is taken care of when you first run a short program to configure DATA CAPTURE 4.0 to your system. Then you don't have to be concerned with it again. If you move your cards around later you can reconfigure DATA CAPTURE 4.0.
Q. Do I have to build a file on the other system to get it sent to my Apple?
A. No. If the other system can list it you can capture it.
Q. How easy is it to transmit text or data to another system?
A. You can load the text or data into DATA CAPTURE 4.0 from the disk and transmit it. Or you can transmit what you have typed into DATA CAPTURE 4.0.
Q. How can I be sure the other system receives what I send it?
A. If the other system works in Full Duplex, it 'echoes' what you send it, then DATA CAPTURE 4.0 adjusts its sending speed to the other system and won't send the next character until it is sure the present one has been received. We call that 'Dynamic Sending Speed Adjustment'.
Q. What if the other system works only in Half Duplex.
A. A different sending routine is provided for use with Half Duplex systems.
Q. What if I want to transmit a program to the other system?
A. No problem. You make the program into a text file with a program that is provided with DATA CAPTURE 4.0, load it into DATA CAPTURE 4.0 and transmit it.
Q. What type files can I read and save with DATA CAPTURE 4.0?
A. Any Apple DOS sequential text file. You can create and edit EXEC files, send or receive VISCIALC© data files, send or receive text files created with any editor that uses text files.
Q. Can I leave DATA CAPTURE 4.0 running on my Apple at home and use it from another system?
A. Yes. If you are using the Micromodem II™ you can call DATA CAPTURE 4.0 from another system. This is handy if you are at work and want to transmit something to your unattended Apple at home.
Q. Where can I buy DATA CAPTURE 4.0?
A. Your local Apple dealer. If he doesn't have it ask him to order it.

PRICE: $65.00
Lower Case Adapter $65.00

TITLE: GRAPH

This program allows you to summarize information for any data file in the form of a bar graph including code labels, line totals and percentages. To use the graph program you select the item of information you want to graph and the sorting conditions you wish to apply. For example, the command ("Graph") diagnosis "IF" age ⁵ 15) would provide a graph of the frequency of coded diagnosis for children age fifteen. The correct label for each diagnosis is obtained from the "Codebook" program.

TITLE: GIANT LETTER

Brilliantly-colored letters of full screen height; appear one-at-a-time, in sequence, to spell out messages. Successive words have different colors. A running summary of letters, in APPLE characters, appears in the bottom 4 lines of the screen, as the giant letters are presented. Very good program for shop windows.

PRICE: DISK, 30.00
TAPE, 25.00

TITLE: INTELLIGENT KEYPUNCH
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

Intelligent Keypunch is a sophisticated product designed for the distributed computing market. Data entry may be performed off-line at anytime by an untrained operator, and may be stored for later transmission to a remote computer. Data may also be received from a remote computer and stored for later file manipulations. Initial preparatory activities may require assistance from a data processing professional.

TITLE: MESSAGES
PUBLISHED BY: CALIFORNIA INFORMATION

HI-RES ALPHANUMERIC MESSAGE: 28 crisp, readable character/line, 4 lines/page x 3 pages of text. Characters "puff" onto the screen at comfortable reading speed. When a page fills, an instant dissolve occurs. Messages can be made to repeat or freeze on-screen at user option.
THE SCROLLING WONDER: 4 brief messages appear in APPLE uppercase characters by: "floating" onto the screen from below. Messages enter in random sequence, with random left-right placement, and a random 50% of messages "flash". A multiple-rainbow grand finale ends the program. Very good program to run at point of purchase.

TITLE: MULTI-MESSAGE AD
PUBLISHED BY: CONNECTICUT INFORMATION

A program to allow the APPLE computer to serve as an automated ad machine is now available in INTEGER BASIC on disc. The program, called "MULTI-MESSAGE WITH INTERLEAVED COLOR PATTERNS", allows entry of up to 10 messages of 239 characters each.
The characters are very visible, blue-tinted hi-res letters. They are 1/8 screen height x 28/line x 4 lines/page, and "puff" occur when a screen page is filled. Lo-res kaleidoscope or abstract art patterns can be interposed between messages, at user option.
Up to 40 groups of 10 messages with associated color patterns may be stored on the program disc. The program can be used by unskilled persons for instant ads in shop windows, counter displays, trade-show booths, physicians waiting rooms, and for teleprompting in broadcast stations. If multiple TV/monitors are connected to one APPLE, the ad effectiveness is increased.
PRICE: 35.00

TITLE: PASCAL UTILITY MICROMODEM PACKAGE (PUMP)
PUBLISHED BY: MICRO SOFTWARE

The Pascal Utility Micromodem Package is a set of intrinsic functions designed to facilitate the use of the D.C. Hayes Micromodem II with Apple/UCSD pascal. Functions are:

FUNCTION	TYPE	DESCRIPTION
RING	BOOLEAN	Returns a TRUE value if the phone is ringing
CARRIER	BOOLEAN	Returns a TRUE if carrier is present
CARON	BOOLEAN	Sets originate/answer and baud rate
CONNCT	N/A	Connects a phone, does not turn on carrier
DIAL	STRING	Dials phone number contained in a string
DIAL	CHAR	Dials a single digit
DISCON	N/A	Hangs up the phone and turns off carrier
WRDLNGTH	INTEGER	Sets the word length and parity for transmit
MDMSND	CHAR	Sends a single character
GETMDM	CHAR	Gets a single character from the modem
STAT	INTEGER	Gets contents of ACIA status register
INITMDM	N/A	Initializes the ACIA and modem
DELAY	INTEGER	Delays specified amount of milliseconds

All the above functions and procedures have been placed into a intrinsic unit and the unit has been placed in the SYSTEM LIBRARY on the diskette we supply. This eliminates the need for a separate linking step for most programs using the PUMP routines. We have also modified the Apple/UCSD Pascal BIOS (Basic I/O Subsystem) on the diskette so as to properly operate the Micromodem, yet still retain full compatability with all Apple peripherals.
We also include a routine for those users that have Dan Paymar's Lower Case Adapter, that modifies BIOS to allow the display of lower case characters.
The documentation supplied includes source listings of all the functions and several example programs to illustrate the use of the PUMP routines.

PRICE: 24.95

TITLE: SATELLITE TRACKING SOFTWARE
PUBLISHED BY: SAT. TRAC INTERNATIONAL

SAT TRAK International produces practical scientific software for amateurs, professionals and schools at packaged software prices. These are designed as flexible, highly sophisticated tools which can be operated without special training by anyone with a small, "personal" computer.
There are three standard programs POSN (for position), LOOK (for look angles) and OBS (for observation update). With these the user has all the software necessary to find the geographical location of a satellite, find its location in space in relation to his location anywhere on earth and update the satellite's orbital parameters based on a visual or radio (doppler shift) observation. Amateur radio operators can now run a full week's (or more) worth of "Look Angles" (AZ, EL, RANGE) on OSCAR in only a few minutes. Astronomers can easily compute the Right Ascension/Declination of a satellite and quickly acquire it by telescope. Satellit enthusiats will know where to look for larger satellites at night, with the unaided eye.
All that is required for input are orbital parameters for each satellite which are

easily available from NASA at no cost. NASA will supply these regularly to any school, individual or organization which will make practical use of the material and not abuse or overload their capability to provide the data.
All programs come with UPDATE, a 30-50 satellite data base management program and sample NASA data.
TRAK program plots satellite position on a world map display.
FORTRAN program series available in listing/card format. New manual allows easy conversion to any FORTRAN capable system.
CUSTOM mods available for day/month and local time output.
TECHNICAL NOTES
10 year almanac
Solar ephemeris for earth shadow calculations
±2 , ± 5 second accuracy when used properly
Leap years accounted for
10 to 50 satellite data base
Self-test functions
2nd & 3rd order zonal gravitational effects used
Double precision not required
Antenna or telescope could be driven with LOOK AZ/EL output
Handles synchronous, highly eliptical, and circular orbits
Generates:
LATITUDE
LONGITUDE
ALTITUDE
RIGHT-ASCENSION
DECLINATION
RANGE
AZIMUTH
ELEVATION
for any time
PAST
PRESENT
FUTURE
PRICE:
TRAK/UPDATE « GRAPHICS, 20.00
POSN/LOOK/OBS/UPDATE, 25.00
TRAK/POSN/LOOK/OBS/UPDATE, TAPE, 39.00
TRAK/POSN/LOOK/OBS/UPDATE; DISK, 45.00

TITLE: SUPER MESSAGE
PUBLISHED BY: CONNECTICUT INFORMATION SYSTEMS CO.

Use the APPLE II to "broadcast" colorful messages in shop windows, counter displays, trade shows, and around factories, schools, hospitals, ships and military bases. SUPER MESSAGE produces messages in full-page "chunks". Each page allows statements of mixed typestyles, typesizes and colors, in mixed upper and lower case. Five typestyles are available. They include regular APPLE characters, double height, double width, both double height & double width, and extra heavy double height & double width. Six colors are available for each typestyle. Centering routines automatically center the text vertically & horizontally, and automatically produce a word-wrap for multi-line statements. Users can chain pages of text together to make multi-page messages. Pages can be advanced manually, or at user option. Multipage messages can be stored to disc and recalled instantly. The program requires 48K with APPLESOFT in ROM.
PRICE: $50.00 postaid.

TITLE: THE AUTODIALER II
PUBLISHED BY: MODULAR SOFTWARE

The Autodialer II allows Apple II computer users to dial ABBS, CBBS, and Forum 80 with unusual ease. It features a multi-page menu and single key select. Autodialer II requires Applelsoft II and Micromodem. It allows you to store names, numbers, and up to 14 lines of information on each entry. Autodialer II also allows the following options: Manual dial, Word Length and parity, Duplex toggle, Case toggle, Transparent mode toggle, Hang up, Return to Terminal mode. It was written in modular fashion, and thus is easily modifiable and maintainable.
PRICE: $15.00

TITLE: THE ULTIMATE TRANSFER
PUBLISHED BY: MICRO-WARE DISTRIBUTING INC.

Upload or download programs to distant areas over the phone (INTEGER, A-SOFT, MACH. LANG.) Needs 48K and DC Hayes Assoc. Micromodem.
PRICE: $25.00

TITLE: VARIABLE MESSAGE
PUBLISHED BY: CONNECTICUT INFORMATION

8 colorful characters/line x 4 lines/page x 6 pages of text. Characters and background can each be any of 16 colors. Background can change color as page changes, and can show colored "snowflakes". Messages can be repeated or frozen on screen. Extremely colorful and eye-catching on store counters and at trade-show exhibits.
PRICE: DISK, 20.00
TAPE, 15.00

TITLE: VIDEO MARQUEE
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.

Video Marquee is a super slide show and billboard combined. Twelve pictures of your own creation (or ours) are shown sequentially *without* access to the disk after the programs are loaded. Speed is controlled by the paddles from a complete stop to very fast (twelve pictures in two seconds).
While your message and/or pictures are shown in the center, a colorful double size billboard displays your words of wisdom in a continual parage around the screen. A great Apple dealer demo or retail store eye catcher, and a fun way to show off the pictures you've made with E-Z Draw.
48K.

TITLE: SLIDE MAKER
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.

Slide Maker is a utility program which takes pre-drawn pictures and makes up the slide files for Video Marquee.
48K.

TITLE: VIDEO MESSAGE DISPLAY
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

The Video Message Display package converts a computer into an electronic bulletin board. A set of simple commands allows the user to define a series of "slides" that can be displayed in any sequence and for varying amounts of time.

Low resolution displays offer normal-sized characters in normal, reverse, or blinking video. High resolution displays permit inter-mixed characters of three different sizes in either normal or reverse video. In addition, the background of the "slide" can be displayed in any high resolution color. Once a slide program has been shown, the system can repeat that show or switch to a show sequence stored in another disk drive.
A professional version, model VMP, is also available. It uses the Mountain Hardware clock and displays the time on the screen. The VMP also provides hard-copy slide logs for use by television stations.

TITLE: VT100 EMULATOR
PUBLISHED BY: APPLE COMPUTER INC.

Turn your Apple into a remote timesharing terminal! The VT100 Emulator program allows you to use your Apple II or II Plus computer as a conversational terminal (with 40-character/line, uppercase-only display) on RSTS/E based, PDP-11™ systems. With this program and an Apple Communications Interface Card, your Apple computer can communicate at 110 or 300 baud with large timesharing systems, either directly or via telephone link (through an acoustic coupler). You save money on hardware, because your Apple computer performs many of the functions of Digital Equipment Corporation's expensive VT100 terminals. And since your Apple is a powerful microcomputer, you can develop programs on it locally and reduce on-line charges. That's the kind of cost-effectiveness you just can't get with an ordinary terminal.
The VT100 Emulator also: automatically configures your Apple computer as a recognizable terminal to the PDP-11 system ... so you save time; allows you to transfer files easily between your Apple computer and the timesharing system ... so you work more efficiently; lets you use your Apple with systems having modified RSTS/E prompt sequences ... so you get greater system flexibility.
To log on to any RSTS/E system, you must already have an account number and password for that system. The VT100 Emulator then simplifies connection procedures. A few keystrokes and a telephone call are all that's usually required.
The VT100 Emulator's helpful menu makes the program easy to use. Select Auto Set Up (option A), for instance, to configure your Apple system as a "recognizable" terminal to the host PDP-11. A series of commands automatically handles the task. Or select File Transfer (option F), to transfer files between your Apple computer and the timesharing system. The program leads you step-by-step into making your file transfers correctly.
By selecting Set Expected Prompt (Option P), you're able to change the "prompt" anticipated by your Apple, to communicate with RSTS/E systems that don't use the standard "READY" prompt. Choosing Resume Terminal Operation (option R) clears your monitor screen and returns operator control. Lastly, choosing EXIT (option E) automatically "logs off" your Apple, and terminates the VT100 Emulator program.
The VT100 Emulator program is written in Applesoft BASIC. To use it, you'll need: an Apple II Plus with 48K bytes RAM; or an Apple II with 48K bytes RAM and an Applesoft BASIC Firmware Card; or an Apple II with the Apple Language System. Plus: Auto-Start ROM; a video monitor or television; one or more Apple Disk IIs (one with controller and 16-sector PROMs); an unmodified Apple Communications Interface Card; an acoustic coupler or modem; an account and password for logging on to a RSTS/E timesharing system.
With the VT100 Emulator package, you'll receive: 1) VT100 Emulator program diskette; 2) user instructions.
PRICE: $75.00

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TITLE: APPLE
PUBLISHED BY: COMPUTER DESIGN LABS
8080 version of Zapple

TITLE: TPM
PUBLISHED BY: COMPUTER DESIGN LABS
TPM now available for TRS-80 Model II! A NEW Z80 disk operation system! This is not CP/M. It's better! You can still run any program which runs with CP/M but unlike CP/M this operating system was written specifically for the Z80 and takes full advantage of its extra powerful instruction set. In other words its not warmed over 8080 code! Available for TRS-80 (Model I or II). Tarbell, Xitan DDDC, SD Sales "VERSA-FLOPPY", North Star (SD&DD), and Digital (Micro) Systems.
PRICE: $79.95/$25

TITLE: SYSTEM MONITOR BOARD (SMB II)
PUBLISHED BY: COMPUTER DESIGN LABS
A complete I/O board for S-100 systems. 2 serial ports, 2 parallel ports, 1200/2400 baud cassette tape interface, sockets for 2K of RAM, 3-2708/2716 EPROM's or ROM, jump on reset circuitry. Bare board $49.95/$20

TITLE: ROM FOR SMB II
PUBLISHED BY: COMPUTER DESIGN LABS
2KXB masked ROM of Zapple monitor. Includes source listing.
PRICE: $34.95/$15

TITLE: PAYROLL (source code only)
PUBLISHED BY: COMPUTER DESIGN LABS
The Osborne package. Requires C Basic 2.
PRICE: 5" disks $124.95 (manual not included)
8" disks $99.95 (manual not included)
Manual $20.00

TITLE: ACCOUNTS PAYABLE/RECEIVABLE (source code only)
PUBLISHED BY: COMPUTER DESIGN LABS
By Osborne, Requires C Basic 2.
PRICE: 5" disks $124.95 (manual not included)
8" disks $99.95 (manual not included)
Manual $20.00

TITLE: GENERAL LEDGER (source code only)
PUBLISHED BY: COMPUTER DESIGN LABS
By Osborne, Requires C Basic 2
PRICE: 5" disks $99.95 (manual not included)
8" disks $99.95 (manual not included)
Manual $20.00

TITLE: C BASIC 2
PUBLISHED BY: COMPUTER DESIGN LABS
Required for Osborne software.
PRICE: $99.95/$20

TITLE: SYSTEM/6
PUBLISHED BY: COMPUTER DESIGN LABS
TPM with utilities, Basic I Interpreter, Basic E compiler, Macro I assembler, Debug I debugger, and ZEDIT text editor.
PRICE: $339.75

TITLE: BASIC I
PUBLISHED BY: COMPUTER DESIGN LABS
A powerful and fast Z80 Basic interpreter with EDIT, RENUMBER, TRACE, PRINT USING, assembly language subroutine CALL, LOADGO for "chaining", COPY to move text, EXCHANGE, KILL, LINE INPUT, error intercept, sequential file handling in both ASCII and binary formats and much, much more. It runs in a little over 12 K. An excellent choice for games since the precision was limited to 7 digits in order to make it one of the fastest around. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $49.95/$15

TITLE: BUSINESS BASIC
PUBLISHED BY: COMPUTER DESIGN LABS
The most powerful Basic for business applications. It adds to Basic II with random or sequential disk files in either fixed or variable record lengths, simultaneous access to multiple disk files, PRIVACY command to prohibit user access to source code, global editing, added math functions, and disk file maintenance capability without leaving Basic (list, rename, or delete). Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $179.95/$25

TITLE: ZEDIT
PUBLISHED BY: COMPUTER DESIGN LABS
A character oriented text editor with 26 commands and "macro" capability for stringing multiple commands together. Included are a complete array of character move, add, delete, and display function. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $49.95/$15

TITLE: ZTEL
PUBLISHED BY: COMPUTER DESIGN LABS
Z80 Text Editing Language - Not just a text editor. Actually a language which allows you to edit text and also write, save, and recall programs which manipulate text. Commands include conditional branching, subroutine calls, iteration, block move, expression evaluation, and much more. Contains 36 value registers and 10 text registers. Be creative! Manipulate text with commands you write using Ztel. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $79.95/$25

TITLE: TOP
PUBLISHED BY: COMPUTER DESIGN LABS

A Z80 Text Output Processor which will do text formatting for manuals, documents, and other word processing jobs. Works with any text editor. Does justification, page numbering and headings, spacing, centering, and much more! Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $79.95/$25

TITLE: LINKER
PUBLISHED BY: COMPUTER DESIGN LABS

How many times have you written the same subroutine in each new program? Top notch professional programmers compile a library of these subroutines and use a Linker to tie them together at assembly time. Development time is thus drastically reduced and becomes comparable to writing in a high level language but with all the speed of assembly language. So, get the new CDL Linker and start writing programs in a fraction of the time it took before. Linker is compatible with Macro I & II as well as TDL/Xitan assemblers version 2.0 or later. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $79.95/$20

TITLE: DEBUG I
PUBLISHED BY: COMPUTER DESIGN LABS

Many programmers give up on writing in assembly language even though they know their programs would be faster and more powerful. To them assembly language seems difficult to understand and follow, as well as being a nightmare to debug. Well, not with proper tools like Debug I. With Debug I you can easily follow the flow of any Z80 or 8080 program. Trace the program one step at a time or 10 steps or whatever you like. At each step you will be able to see the instruction executed and what it did. If desired, modifications can then be made before continuing. It's all under your control. You can even skip displaying a subroutine call and up to seven breakpoints can be set during execution. Use of Debug I can pay for itself many times over by saving you valuable debugging time. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $79.95/$20

TITLE: DEBUG II
PUBLISHED BY: COMPUTER DESIGN LABS

This is an expanded debugger which has all of the features of Debug I plus many more. You can "trap" (i.e. trace a program until a set of register, flag, and/or memory conditions occur). Also, instructions may be entered and executed immediately. This makes it easy to learn new instructions by examining registers/memory before and after. And a RADIX function allows changing between ASCII, binary, decimal, hex, octal, signed decimal, or split octal. All these features and more add up to give you a very powerful development tool. Both Debug I and II must run on a Z80 but will debug both Z80 and 8080 code. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $99.95/$20

TITLE: ZAPPLE
PUBLISHED BY: COMPUTER DESIGN LABS

A Z80 executive and debug monitor. Capable of search, ASCII put and display, read and write to I/O ports, hex math, breakpoint, execute, move, fill, display, read and write in Intel or binary format tape, and more! on disk. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.

TITLE: MACRO II
PUBLISHED BY: COMPUTER DESIGN LABS

Expands upon Macro I's linking capability (which is useful but somewhat limited) thereby being able to take full advantage of the optional Linker. Also a time and date function has been added and the listing capability improved. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE $99.95/$25

TITLE: MACRO I
PUBLISHED BY: COMPUTER DESIGN LABS

A macro assembler which will generate relocateable or absolute code for the 8080 or Z80 using standard Intel mnemonics plus TDL/Z80 extensions. Functions include 14 conditionals, 16 listing controls, 54 pseudo-ops, 11 arithmetic/logical operations, local and global symbols, chaining files, linking capability with optional linker, and recursive/reiterative macros. This assembler is so powerful you'll think it is doing all the work for you. It actually makes assembly language programming much less of an effort and more creative. Available for operation with a Z80 CPU using the CP/M or similar type disk operating system.
PRICE: $79.95/$20

TITLE: INFORMATION MASTER!
PUBLISHED BY: ISLAND CYBERNETICS

Are you overwhelmed by your collection of reprints, technical literature, spec. sheets, magazine articles, correspondence, etc.? Get back in control with the INFORMATION MASTER program.
Use combinations of keywords to quickly find exactly what you want. Search a 500 entry data base in 12 to 15 seconds and retrieve essentially unlimited text.
INFORMATION MASTER runs on 8080 or Z-80 microcomputers using a CP/M compatible operating system and having at least two disk drives and 32K of memory. Disk formats available: 8" single density, Vector Graphic 5", Heath H-89 5" (modified CP/M).
INFORMATION MASTER program is shipped ready to run, on disk with demonstration data base and 22 page users manual.
PRICE: $37.50, postage paid

TITLE: T/MAKER
PUBLISHED BY: LIFEBOAT ASSOCIATES

T/MAKER helps me juggle the imponderables fast and gives me a national overview on my CRT screen. (Yuk!)
T/MAKER can integrate numerical and text data, making analysis easy and then print out a document in hard copy for the clods on Capitol Hill.
T/MAKER is a wonderful fool for data analysis. It is easy to set up calculations

for rows and columns of tabular data, automatically perform the computations, review the results and then modify some of the data to see the impact on the over all results. Several days of manual work can be accomplished in minutes.
T/MAKER is a full screen editor for word processing which handles text up to 255 characters wide. It includes features like text formatting and justification, text buffer for block moves and repeated inserts, global search and replace and commands for printing your letters, reports and documents.
T/MAKER can perform an unlimited number of analysis and reporting tasks which integrate numerical and text processing. For example: • Financial Statements • Balance Sheets • Statistics • Growth & Projections • Profitability Reports • Revenues & Expenditures • Portfolio Analysis • Price Lists • Rate Structures • Inventory Valuation ... and much, much more.
T/MAKER requires a 48K CP/M system, a total of 240K bytes of disk storage, CBASIC-2, and a CRT computer terminal with cursor addressing and clear screen.
PRICE: $275.00 complete with documentation and quick-reference card.
$25.00 documentation alone

PHOENIX SOFTWARE ASSOCIATES

TITLE: PASM

Z80 macro assembler, Intel/TDL mnemonics. Generates Intel hex format or relocatable code in either TDL Object Module format or PSA Relocatable Binary Module format. Supports text insertion, conditional branching within macros, recursive macro calls and parameter passing.
PRICE: $129 with manual, $25 manual alone

TITLE: EDIT

Character oriented text file editor. Includes macro definition capabilities. Handles insertion, deletion, searching, block move, etc. for files of any length. Does not require a CRT.
PRICE: $129 with manual, $25 manual alone

TITLE: PLINK

Two pass disk-to-disk linkage editor/loader which can produce re-entrant, ROMable code. Can link programs that are larger than available memory for execution targeted on another machine. Full library capabilities. Input can be PSA Relocatable Binary Module, TDL Object Module or Microcosft REL files. Output can be a COM file, Intel hex file, TDL Object Module or PSA Relocatable file.
PRICE: $129 with manual, $25 manual alone

TITLE: BUG and uBUG

Z-80 interactive machine level debugging tools for program development. BUG has full mnemonic trace and interactive assembly (mnemonics compatible with PASM). Dynamic breakpoints and conditional traps while tracing (even through ROM!). uBUG is a subset of BUG and is used in memory limited situations.
PRICE: $129 with manual, $25 manual alone

DIGITAL RESEARCH

TITLE: MP/M

Installed for single density MDS-800. Multi-processing derivative of the CP/M operating system. Manual includes CP/M2 documentation.
PRICE: $300 with manual, $50 manual alone

TITLE: MAC

8080 Macro assembler. Full Intel macro definitions. Pseudo Ops include RPC, IRP, REPT, TITLE, PAGE, and MACLIB. Produces absolute hex output plus symbol table file for use by SID and ZSID (see below).
PRICE: $120 with manual, $15 manual alone

TITLE: SID

8080 Symbolic debugger. Full trace, pass count and breakpoint program testing. Has backtrace and histogram utilities. When used with MAC, provides full symbolic display of memory labels and equated values.
PRICE: $105 with manual, $15 manual alone

TITLE: ZSID

Z80 Symbolic debugger with all features of SID.
PRICE: $130 with manual, $15 manual alone

TITLE: TEX

Text output formatter to create paginated, page-numbered and justified copy, Output can be directed to printer or disk.
PRICE: $105 with manual, $15 manual alone

TITLE: DESPOOL

Utility program to permit simultaneous printing from text files while executing other programs.
PRICE: $80 with manual, $10 manual alone

TITLE: tiny C

Interactive interpretive system for teaching structured programming techniques. Manual includes full source listings.
PRICE: $105 with manual, $50 manual alone

TITLE: BDS C COMPILER

Supportb structures, unions, 2 dimensional arrays, pointers, recursion and overlays. Features optimized code generator, variable sized buffers for file I/O, and capability to produce ROMable code. Includes macro package to enable user to produce linkable modules with MAC (see under Digital Research). Floating point functions, full run-time package and machine code library sources provided. Linker, library manager and textbook included. Compiler lacks initializers, statics, floats and longs.
PRICE: $145 with manual, $25 manual alone

TITLE: WHITESMITHS C COMPILER

The ultimate in systems software tools. Produces faster code than a pseudo-code Pascal with more extensive facilities. Conforms to the full UNIX Version 7 language, described by Kernighan and Ritchie, and makes available over 75 functions for performing I/O, string manipulation and storage allocation. Linkable to Microsoft REL files. Requires 60K CP/M.

PRICE: $630 with manual, $30 manual alone

MICROSOFT

TITLE: BASIC-80

Disk Extended BASIC, ANSI compatible with long variable names, WHILE/-WEND, chaining, variable length file records. MBASIC version 4.51 also included on disk.

PRICE: $325 with manual, $25 manual alone

TITLE: BASIC COMPILER

Language compatible with BASIC-80 and 3-10 times faster execution. Produces standard Microsoft relocatable binary output. Includes MACRO-80. Also linkable to FORTRAN-80 or COBOL-80 code modules.

PRICE: $350 with manual, $25 manual alone

TITLE: FORTRAN-80

ANSI 66 (except for COMPLEX) plus many extensions. Includes relocatable object compiler, linking loader, library with manager. Also includes MACRO-80 (see below)

PRICE: $425 with manual, $25 manual alone

TITLE: COBOL-80

Level 1 ANSI 74 standard plus most of Level 2. Full sequential relative, and indexed file support with variable file names. Powerful interactive, formatted screen handling with ACCEPT and DISPLAY verbs. Program segmentation for execution of programs larger than memory and CHAIN command with parameter passing. Full support of CP/M version 2 files. Includes MACRO-80 (see above), linking loader, and relocatable library manager. Requires 48K CP/M

PRICE: $700 with manual, $25 manual alone

TITLE: M/SORT

Optional sort/merge capability for COBOL-80 which conforms fully to SORT/MERGE, Level II of the 1974 ANSI COBOL standard (except COLLATING SEQUENCE IS alphabet-name). Requires COBOL-80.

PRICE: $150 with manual, $10 manual alone, sold as an update to COBOL-80.
$825 with manual, $35 manual alone, COBOL-80 plus M/SORT

TITLE: MACRO-80

8080/Z80 Macro Assembler. Intel and Zilog mnemonics supported. Relocatable linkable output. Loader, Library Manager and Cross Reference List utilities included.

PRICE: $149 with manual, $15 manual alone

TITLE: XMACRO-86

8086 cross assembler. All Macro and utility features of MACRO-80 package. Mnemonics slightly modified from Intel ASM86. Compatibility data sheet available.

PRICE: $275 with manual, $25 manual alone

TITLE: EDIT-80

Very fast random access text editor for text with or without line numbers. Global and intra-line commands supported. File compare utility included.

PRICE: $89 with manual, $15 manual alone

TITLE: muSIMP/muMATH

muSIMP is a high level programming language suitable for symbolic and semi-numerical processing implemented using a fast and efficient interpreter requiring only 7K bytes of machine code. muMATH is a package of programs written in muSIMP. The package performs sophisticated mathematical functions. Keeps track of up to 611 digits. Performs matrix operations on arrays: transpose, multiply, divide, inverse and other integer powers. Logarithmic, exponential, trigonometric simplification and transformation, symbolic differentiation with partial derivatives, symbolic integration of definite and indefinite integrals. Requires 40 K CP/M.

PRICE: $250 with manual, $20 manual alone

TITLE: muLISP-80

Microcomputer implementation of LISP. The interpreter resides in only 7K bytes of memory yet includes 83 LISP functions. Has infinite precision integer arithmetic expressed in any radix from 2 to 36. muLISP80 includes complete trace facility and a library of useful functions and entertaining sample programs.

PRICE: $200 with manual, $15 manual alone

TITLE: PASCAL/M

Compiles enhanced Standard Pascal to compressed efficient Pcode. Totally CP/M compatible. Random access files. Both 16 and 32-bit Integers. Runtime error recovery. Convenient STRINGs. OTHERWISE clause on CASE. Comprehensive manual (90 pp. indexed). SEGMENT provides overlay structure. IMPORT, OUTPORT and untyped files for arbitrary I/O. Requires 56K CP/M. Specify 1) 8080 CP/M, 2) Z80 CP/M, or 3) Cromemco CDOS.

PRICE: $175 with manual, $20 manual alone

TITLE: PASCAL/Z

Z80 native code PASCAL compiler. Produces optimized, ROMable re-entrant code. All interfacing to CP/M is through the support library. The package includes compiler, relocating assembler and linker, and source for all library modules. Variant records, strings and direct I/O are supported. Requires 56K CP/M.

PRICE: $395 with manual, $25 manual alone

TITLE: PASCAL/MT

Subset of standard PASCAL Generates ROMable 8080 machine code. Symbolic debugger included. Supports interrupt procedures. CP/M file I/O and assembly language interface. Real variables can be BCD, software floating point, or AMD 9511 hardware floating point. Includes strings enumerations and record data types. Manual explains BASIC-PASCAL conversion. Requires 32K.

PRICE: $250 with manual, $30 manual alone

TITLE: APL/80

Concise and powerful language for application software development. Complex programming problems are reduced to simple expressions in APL. Features include up to 27K active workspace, shared variables, arrays of up to 8 dimensions, disk workspace and copy object library. The system also supports auxiliary processors for interfacing I/O ports. Requires 48K CP/M and serial APL printing terminal or CRT.

PRICE: $500 with manual, $30 manual alone

TITLE: ALGOL-60

Powerful block-structured language compiler featuring economical run-time dynamic allocation of memory. Very compact (24K total RAM) system implementing almost all Algol 60 report features plus many powerful extensions including string handling direct disk address I/O etc.

PRICE: $199 with manual, $20 manual alone

TITLE: CBASIC-2

Disk Extended BASIC — Non-interactive BASIC with pseudo-code compiler and run-time interpreter. Supports full file control, chaining, integer and extended precision variables, etc. Versions of CRUN for CP/M versions 1.4 and 2.x included in disk.

PRICE: $120 with manual, $15 manual alone

MICRO FOCUS

TITLE: STANDARD CIS COBOL

ANSI 74 COBOL standard compiler fully validated by U.S. Navy tests to ANSI level 1. Supports many features to level 2 including dynamic loading of COBOL modules and a full ISAM file facility. Also, program segmentation, interactive debug and powerful interactive extensions to support protected and unprotected CRT screen formatting from COBOL programs used with any dumb terminal.

PRICE: $850 with manual, $50 manual alone

TITLE: FORMS 2

CRT screen editor. Output is COBOL data descriptions for copying into CIS COBOL programs. Automatically creates a query and update program of indexed files using CRT protected and unprotected screen formats. No programming experience needed. Output program directly compiled by STANDARD CIS COBOL.

PRICE: $200 with manual, $20 manual alone

TITLE: NEVADA COBOL

Subset of ANSI-74. Features fast compilation and execution with small object modules. Has extended arithmetic with 18 digit accuracy. Extended I/O includes random access files and sequential files of both fixed and variable length records, and interactive accept/display verbs. Good error messages and debugging facilities enhance program development. Requires a 32K CP/M system.
PRICE: $149 with manual, $25 manual alone

EIDOS SYSTEMS

TITLE: KBASIC

Microsoft Disk Extended BASIC version 4.51 integrated with KISS Multi-Keyed Index Sequential and Direct Access file management as 9 additional BASIC commands. KISS Included as relocatable modules linkable to FORTRAN-80, COBOL-80, and BASIC COMPILER. Specify CP/M version 1.4 or 2.x when ordering. Requires 48K CP/M.
PRICE: $585 with manual, $45 manual alone
To licensed users of Microsoft BASIC-80 (MBASIC)
PRICE: $435 with manual, $45 manual alone

TITLE: XYBASIC

Interactive Process Control BASIC — Full disk BASIC features plus unique commands to handle byte rotate and shift and to test and set bits. Available in several versions:
Integer ROM squared — **$350 with manual, $25 manual alone**
Integer CP/M — **f$350 with manual, $25 manual alone**
Extended ROM squared — **$450 with manual, $25 manual alone**
Extended CP/M — **$450 with manual, $25 manual alone**
Extended Disk CP/M — **$550 with manual, $25 manual alone**
Integer CP/M Run Time Compiler — **$350 with manual, $25 manual alone**
Extended CP/M Run Time Compiler — **$450 with manual, $25 manual alone**

TITLE: RECLAIM

A utility to validate media under CP/M. Program tests a diskette or hard disk surface for errors, reserving the imperfections in invisible files, and permitting continued usage of the remainder. Essential for any hard disk. Requires CP/M version 2.
PRICE: $80 with manual $5 manual alone

TITLE: BASIC UTILITY DISK

Consists of: (1) CRUNCH-14 — Compacting utility to reduce the size and increase the speed of programs in Microsoft BASIC 4.51, BASIC-80 and TRS-80 BASIC. (2) DPFUN — Double precision subroutines for computing nineteen transcendental functions including square root, natural log, log base 10, sine, arc sine, hyperbolic sine, hyperbolic arc sine, etc. Furnished in source on diskette and documentation.
PRICE: $50 with manual, $35 manual alone

TITLE: STRING/80

Character string handling plus routines for direct CP/M BDOS calls from FORTRAN and other compatible Microsoft languages. The utility library contains routines that enable programs to chain to a COM file, retrieve command line parameters and search file directories with full wild card facilities. Supplied as linkable modules in Microsoft format.
PRICE: $95 with manual, $20 manual alone

TITLE: STRING/80

Source code available separately.
PRICE: $295

TITLE: THE STRING BIT

FORTRAN character string handling. Routines to find, fill, pack, move, separate, concatenate and compare character strings. This package completely eliminates the problems associated with character string handling in FORTRAN. Supplied with source.
PRICE: $65 with manual, $15 manual alone

TITLE: VSORT

Versatile sort/merge system for fixed length records with fixed or variable length fields. VSORT can be used as a stand-alone package or loaded and called as a subroutine from CBASIC-2. When used as a subroutine, VSORT maximizes the use of buffer space by saving the TPA on disk and restoring it on completion of sorting. Records may be up to 255 bytes long with a maximum of 5 fields. Upper/lower case translation and numeric fields supported.
PRICE: $175 with manual, $20 manual alone

TITLE: IBM/CPM

Program to transfer IBM 3741 data set files to CP/M files or CP/M files to IBM 3741 data sets. Easy to use. Requires two eight inch diskette drives, 24K memory, and a 24 by 80 CRT terminal.
PRICE: $175 with manual, $5 manual alone

CPAids

TITLE: MASTER TAX

Professional tax preparation program. Prepares schedules A, B, C, D, E, F, G, R/RP, SE, TC, ES and forms 2106, 2119, 2210, 3468, 3903, 2441, 4625, 4726, 4797, 4972, 5695 and 6251. Printing can be on readily available, pre-printed continuous forms, on overlays, or on computer generated, IRS approved forms. Maintains client history files and is interactive with CPAids GENERAL LEDGER II (see below)
PRICE: $995 with manual, $30 manual alone, $350 Annual Update Fee

TITLE: STANDARD TAX

As above for schedules A, B, C, D, E, G, R/RP, SE, TC and forms 2106 and 2441. Also, does not maintain client history files.
PRICE: $495 with manual, $30 manual alone, $175 Annual Update Fee

TITLE: GENERAL LEDGER II

Designed for CPA's. Stores complete 12 month detailed history of transactions. Generates financial statements, depreciation, loan amortizations, journals, trial balances, statements of changes in financial position, and compilation letters. Includes payroll system with automatic posting to general ledger. Prints payroll register, W2's and payroll checks.

PRICE: $450 with manual, $30 manual alone

TITLE: T/MAKER

Powerful new tool for preparing management reports with tabular data. Makes financial modeling projects easy. Do you want a weekly profitability report? Set up the table and compute. Just change the sales figures for next week and compute. You have a new report! T/MAKER includes a full screen editor for setting up tables which pages left, right, up and down. Compute includes standard arithmetic, percents, exponents, common transcendental functions, averages, maxima, minima, projections, etc. Requires 48K CP/M, CBASIC-2, CRT terminal with addressable cursor positioning.

PRICE: $275 with manual, $25 manual alone

TITLE: ESQ-1

Professional time and billing for the legal profession. Designed for use by the first-time computer user. Records billable and non-billable time. Complete system includes transaction entry, posting, billing, reports, and client analysis. Records cash receipts, escrow receipts, and escrow transfers. Requires 48K CP/M system, 480K of disk storage space, cursor addressable CRT, and CBASIC-2.

PRICE: $1495 with manual, $50 manual alone

Complete demonstration system for ESQ-1.

PRICE: $75 with manual, $50 manual alone

TITLE: BSTAM

Utility to link one computer to another also equipped with BSTAM. Allows file transfers at full data speed (no conversion to hex), with CRC block control check for very reliable error detection and automatic retry. We use it! It's great! Full wildcard expansion to send. COM, etc. 9600 baud with wire. 300 baud with phone connection. Both ends need one. Standard and versions can talk to one another. This software requires a knowledge of assembler language for installation.

PRICE: $150 with manual, $10 manual alone

TITLE: BSTMS

Intelligent terminal program for CP/M systems. Permits communication between micros and mainframes. Sends character data files to remote computers under complete control. System can record character data sent from remote computer systems and data banks. Includes programs to EXPAND and COMPRESS binary files for transmission. This software requires a knowledge of assembler language for installation.

PRICE: $200 with manual, $25 manual alone

TITLE: WHATSIT?

Interactive data-base system using associative tags to retrieve information by subject. Hashing and random access used for fast response. Requires CBASIC-2.

PRICE: $175 with manual, $25 manual alone

TITLE: SELECTOR III-C2

Data Base Processor to create and maintain multi-key data bases. Prints formatted sorted reports with numerical summaries or mailing labels. Comes with sample applications, including Sales Activity. Inventory, Payables, Receivables, Check Register, and Client/Patient Appointments, etc. Requires CBASIC-2. Supplied in source.

PRICE: $295 with manual, $20 manual alone

TITLE: GLECTOR

General Ledger option to SELECTOR III-C2. Interactive system provides for customized COA. Unique chart of transaction types insure proper double entry bookkeeping. Generates balance sheets, P&L statements and journals. Two year record allows for statement of changes in financial position report. Supplied in source. Requires SELECTOR III-C2. CBASIC-2 and 56K system.

PRICE: $350 with manual, $25 manual alone

TITLE: MAGSAM III

Sophisticated keyed access file support system. Supports random, sequential, and generic retrieval by key. Also, multiple secondary keys. Dynamic allocation and extension of files with automatic free space reclamation, interactive tutorial included to get the user started. Complete with documentation and quick reference card. Specify CBASIC or Microsoft BASIC version. Requires 48K system.

PRICE: $145 with manual, $25 manual alone

TITLE: MAGSAM IV

High speed machine code version of MAGSAM III for CBASIC only. Distributed as pre-loaded modules and Microsoft relocatable object modules.

PRICE: $295 with manual, $25 manual alone

DMA

TITLE: CBS

Configurable Business System is a comprehensive set of programs for defining custom data files and application systems without using a programming language such as BASIC, FORTRAN, etc. Multiple key fields for each data file are supported. Set-up program customizes system to user's CRT and printer. Provides fast and easy interactive data entry and retrieval with transaction processing. Report generator program does complex calculations with stored and derived data, record selection with multiple criteria, and custom formats. Sample inventory and mailing list systems included. No support language required.

PRICE: $395 with manual, $40 manual alone

MICROPRO

TITLE: SUPER-SORT I

Sort, merge, extract utility as absolute executable program or linkable module in Microsoft format. Sorts fixed or variable records with data in binary, BCD Packed Decimal, EBCDIC, ASCII, floating & fixed point, exponential, field justified, etc. Even variable number of fields per record!
PRICE: $225 with manual, $25 manual alone

TITLE: SUPER-SORT II

Above available as absolute program only.
PRICE: $175 with manual, $25 manual alone

TITLE: SUPER-SORT III

As II without SELECT/EXCLUDE.
PRICE: $125 with manual, $25 manual alone

TITLE: DATASTAR

Professional forms control entry and display system for key-to-disk data capture. Menu driven with built-in learning aids. Input field verification by length, mask, attribute (i.e. upper case, lower case, numeric, auto-dup, etc.). Built-in arithmetic capabilities using keyed data, constant and derived values. Visual feedback for ease of forms design. Files compatible with CP/M-MP/M supported languages. Requires 32K CP/M and CRT with addressable cursor.
PRICE: $35 with manual, $35 manual alone

TITLE: WORD-STAR

Menu driven visual word processing system for use with standard terminals. Text formatting performed on screen, Facilities for text paginate, page number, justify, center and underscore. User can print one document while simultaneously editing a second. Edit facilities include global search and replace. Read/Write to other text files, block move, etc. Requires CRT terminal with addressable cursor positioning.
PRICE: $445 with manual, $40 manual alone

TITLE: WORD-STAR-MAIL-MERGE

As above with option for production mailing of personalized documents with mail lists from DATASTAR or NAD.
PRICE: $575 with manual, $40 manual alone

TITLE: WORD-MASTER

Text Editor — In one mode has superset of CP/M's ED commands including global searching and replacing, forwards and backwards in file in video mode, provides full screen editor for users with serial addressable-cursor terminal.
PRICE: $145 with manual, $25 manual alone

TITLE: MAGIC WAND

Word processing system with simple, easy to use full screen text editor and powerful print processor. Editor has all standard editing functions including text insert and delete, global search and replace, block move and library files for boiler plate text. Print processor formatting commands include automatic margins, pagination. headings & footings, centered and justified text. Also prints with true proportional spacing, merges with data files for automatic form letters, and performs run-time conditional testing for varied output. Requires 32K CP/M and CRT terminal with addressable cursor.
PRICE: $395 with manual, $40 manual alone

TITLE: TEXTWRITER III

Text formatter to justify and paginate letters and other documents. Special features include insertion of text during execution from other disk files or console, permitting recipe documents to be created from linked fragments on other files. Has facilities for sorted index, table of contents and footnote insertions. Ideal for contracts, manuals, etc. Now compatible with Electric Pencil and WordStar prepared files.
PRICE: $125 with manual, $20 manual alone

TITLE: DATEBOOK

Program to manage time just like an office appointment book but using the speed and memory of a computer. Keeps track of three appointment schedules (three dental chairs, three attorneys, etc.) at once. Appointments consist of name, reason for the appointment, the date and time, and the length of the appointment. System can be quickly customized for the individual user. Many helpful features for making, changing, finding, and reporting appointments. Requires 48K CP/M and 18K bytes diskette storage. Requires 80 x 24 cursor addressable terminal. Specify 8080 CP/M, Z80 CP/M or Cromemco CDOS.
PRICE: $295 with manual, $25 manual alone

STRUCTURED SYSTEMS GROUP

Complete interactive accounting software for business. Each product can be used stand-alone or with automatic posting to the general ledger. Each product is thoroughly tested and very well documented.
GENERAL LEDGER — **$820 with manual, $40 manual alone**
ACCOUNTS RECEIVABLE — **$820 with manual, $40 manual alone**
ACCOUNTS PAYABLE — **$820 with manual, $40 manual alone**
PAYROLL — **$820 with manual, $40 manual alone**
INVENTORY CONTROL — **$820 with manual, $40 manual alone**

TITLE: ANALYST

Customized data entry and reporting system. User specifies up to 75 data items per record. Interactive data entry, retrieval, and update facility makes information management easy. Sophisticated report generator provides customized reports using selected records with multiple level breakpoints for summarization. Requires a disk sort utility such as QSORT, SUPER-SORT or VSORT and CBASIC-2.
PRICE: $250 with manual, $15 manual alone

TITLE: LETTERIGHT

Program to create, edit and type letters or other documents. Has facilities to enter, display, delete and move text, with good video screen presentation. Integrates with NAD for form letter mailings.

PRICE: $200 with manual, $25 manual alone

TITLE: NAD

Name and Address selection system. Interactive mail list creation and maintenance program with output as full reports with reference data or restricted information for mail labels. Transfer system for extraction and transfer of selected records to create new files. QSORT required if sorting is desired.

PRICE: $100 with manual, $20 manual alone

TITLE: QSORT

Fast sort/merge program for files with fixed record length, variable field length information. Up to five ascending or descending keys. Full back-up of input files created.

PRICE: $100 with manual, $20 manual alone

TITLE: HEAD CLEANING DISKETTE

Cleans the drive Read/Write head in 30 seconds. Diskette absorbs loose oxide particles, fingerprints, and other foreign particles that might hinder the performance of the drive head. Lasts at least 3 months with daily use. Specify 5" or 8".

PRICE: Single sided — $20 each/$55 for 3
Double sided — $25 each/$65 for 3

TITLE: DC 300 Data Cartridges

Specify 450'XL or 300' certified.

PRICE: $100 pack of 5

TITLE: FLIPPY DISK KIT

Template and instructions to modify single sided 5¼" diskettes for use of second side in single sided drives.

PRICE: $12.50

TITLE: FLOPPY SAVER

Protection for center holes for 5" and 8" floppy disks. Only 1 needed per diskette. Kit contains centering post, pressure tool and tough 7 mil mylar reinforcing rings for 25 diskettes.

PRICE: $14.95 5" Kit
$7.95 5" Rings only
$16.95 8" Kit
$8.95 8" Rings only

TITLE: The CP/M HANDBOOK

(with MP/M) by Rodnay Zaks

PRICE: $13.95

TITLE: PASCAL USER MANUAL AND REPORT

By Jensen and Wirth. The standard textbook on the language. Recommended for use by Pascal/Z, Pascal/M and Pascal/MT users.
PRICE: $12

TITLE: THE C PROGRAMMING LANGUAGE

By Jensen and Wirth. The standard textbook on the language. Recommended for use by Pascal/Z, Pascal/M and Pascal/MT users.
PRICE: $12

TITLE: STRUCTURED MICROPROCESSOR PROGRAMMING

By the authors of SMAL/80. Covers structured programming, the 8080/8085 instruction set and the SMAL/80 language.
PRICE: $20

CP/M SECTION II — BUSINESS, WORD PROCESSING, DATA BASES AND OTHERS

Medical Management System 2CPM-1
Dental Management System 2CPM-1
General Ledger Accounting System 2CPM-1
Accounts Payable 2CPM-1
Payroll with Cost Accounting 2CPM-2
Inventory Management and Control 2CPM-2
Insurance Agency Management System 2CPM-3
Accounting System 2CPM-4
General Ledger 2CPM-4
Accounts Payable 2CPM-5
Accounts Receivable 2CPM-5
Payroll 2CPM-6
Inventory 2CPM-7
Mailing List 2CPM-7
Textwriter III 2CPM-8
Moonshadow Text Formatter/for UCSD Pascal™ 2CPM-8
T.I.M. 2CPM-9
Cobol-80 ..... 2CPM-9
Tiny-C Two 2CPM-9
Fortran-80 ..... 2CPM-10
Z-Term 2CPM-10
Insoft Accounting System 2CPM-10
Master Tax 2CPM-11
Microstat 2CPM-11
Nursing Homes 2CPM-11
Payroll for Microcomputers 2CPM-11
Real Estate Management 2CPM-11
The Configurable Business System (CBS) 2CPM-12
CP/M To Apple CP/M 2CPM-12
CP/Modem 2CPM-12
Date Book 2CPM-12
General Ledger II 2CPM-13
Job Costing 2CPM-13
Job-Costing Package 2CPM-13
Heriarchial Data Base System/HDBS 2CPM-14
Real Estate Software Package 2CPM-15
Spellguard 2CPM-16
Payable Package 2CPM-17
Receivable Package 2CPM-17
General Ledger 2CPM-18
Job Costing Package 2CPM-18
Inventory II 2CPM-19
Order Entry/Invoicing Package 2CPM-20
Payroll I 2CPM-21
Cash Register 2CPM-21
Apartment 2CPM-22
Dental 2CPM-23
Medical 2CPM-24
Sruvey 2CPM-25
CBasic-2 ..... 2CPM-26
Pearl 2CPM-27
Reformatter 2CPM-28

TITLE: MEDICAL MANAGEMENT SYSTEM
PUBLISHED BY: UNIVAIR

This system is designed for use by a single doctor or small to medium clinic. It maintains detailed records of all patients, office charges, payments, procedures, scheduling, and accounts receivable, both by individual doctor and by clinic. It also handles daily and accumulative ticket and payment registers, detailed, summary, and aged trial balances, patient file inquiry, patient name search, and archiving of inactive patients to a storage disk until needed later. Office charges are set to handle ICDA-9 diagnosis codes and CPT-4 procedures, and provisions are made to allow an office to insert their standard charges for automatic printing of the descriptions and costs on monthly statements and the standard AMA insurance form. The report section provides an analysis of the total number of each of these procedures performed by each doctor and income generated during the current month, so intelligent decisions can be made regarding the most efficient utilization of a physicians office hours. In addition to over 20 different reports, the system automatically prints out the monthly statements to the responsible party (deleting zero-balance accounts), and fills out most portions of the standard AMA, Blue Cross, and Medicare insurance forms. Approximately 3000 fully detailed patient records may be held on one eight-inch double density disk.
PRICE: $750/20

TITLE: DENTAL MANAGEMENT SYSTEM
PUBLISHED BY: UNIVAIR

This program is very similar to the Medical Management System except that it is programmed to handle the standard ADA Dental Codes and complete most portions of the ADA insurance form.
PRICE: $750/20

TITLE: GENERAL LEDGER ACCOUNTING SYSTEM
PUBLISHED BY: UNIVAIR

Has a complete chart of accounts file setup and maintenance for either a single user or can be used as a client write-up system by a CPA. All programs are menu-driven automatically with no operator input whatsoever. Accounts have unlimited sub-scheduling routines as well as 10 different accumulator options which print out totals at the end of the general ledger. Comes complete with a manual post-only payroll, employee file maintenance, check register and dispursements, journal voucher register, profit and loss statement, balance sheet, comparison reports, chart of accounts report, working trial balance, MTD and YTD totals. Interfaces with the Medical and Dental Management Systems, Accounts Payable, Accounts Receivable, Payroll, Insurance Agency, and Real Estate Agency Systems for automatic double-entry posting. The operator should have at least a basic working knowledge of double-entry accounting.
PRICE: $500/20

TITLE: ACCOUNTS PAYABLE
PUBLISHED BY: UNIVAIR

This stand-alone program will produce all reports and checks necessary for a well rounded Accounts Payable System. All programs are menu-driven and the system performs all file calls, sorts, merges, and chaining back to the main menu with no operator input whatsoever. It will also automatically make the

double-entry posting into our general ledger package which eliminates duplicate efforts and possible clerical errors. Reports include: Cash Requirements/Projections, Check Register, Check Printing, Vendor Master Lists, Open Invoice Register, Aged Open Invoices, and amounts due on or between any two dates or in a given month. Paid invoices are automatically deleted from the file. Cash Requirements Report automatically print out a 30 day, day-by-day recap of amounts due each time it is run. Vendor Master List shows current year amounts paid to each vendor compared to a prior year which serves as a vendor analysis. Aged Open Invoice Register Lists are unpaid invoices by vendor. Discounts can be taken with complete flexibility. Proper use of the Cash Requirements Projection Report can be a valuable tool in aiding cash flow. System will operate fully stand-alone, or can interface with our General Ledger for automatic double-entry posting into appropriate areas. Maintains a complete set of customer records with detailed, summary, and aged trial balances of all open invoices. Automatically ages current, 30, 60, 90, and 120 & older balances; includes credit and debit memos, invoice register, payment register, customer master lists and full customer file inquiry. Is programmed to automatically produce computer-generated end-of-month statements on standard 8.5 by 11 inch continuous form paper for use with window envelopes. Has provisions to suppress zero balance statements so as to provide considerable savings in postage and materials.

PRICE: $500/20, Accounts Receivable - Balance Forward
$500/20, Accounts Receivable - Open Item Only

TITLE: PAYROLL WITH COST ACCOUNTING
PUBLISHED BY: UNIVAIR

System is designed to be run completely stand-alone, or will post into our General Ledger for double-entry accounting. System is designed to provide management of all the necessary city, state, and federal payroll reports and functions. Employee file setup is done on video screen and takes about 5 minutes for input. Thereafter, all that is necessary is to select the current week for processing and all employees scheduled to be paid have computer-generated checks written, with the appropriate deductions withheld from their pay and posted into their MTD/QTD/YTD history files. When used with General Ledger, each of these deductions is posted into the correct expense accounts. System can handle hourly, weekly, semi-monthly, monthly, and salaried employees simultaneously, and has provisions for up to 10 voluntary deduction/garnishment categories. Can handle up to 500 employees on 1 double-density floppy disk. A complete operators manual carefully explains all areas of setup and operation.

PRICE: $500/20

TITLE: INVENTORY MANAGEMENT AND CONTROL
PUBLISHED BY: UNIVAIR

System operates fully stand-alone, or can be used in conjunction with any of our other programs. Maintains a very complete vendor/supplier master file system with additional product group codes for rapid comparisons and cross-indexing. Reports section includes: stock status, stock on order, slow moving stock analysis, below minimum re-order levels, part number inquiry, daily shipments received, and values of stock on-order as well as in inventory. Prior year sales for each item are displayed for sales comparison purposes. The system will accommodate approximately 3000 different intems on 1 double-density floppy disk.

PRICE: $500/20

TITLE: INSURANCE AGENCY MANAGEMENT SYSTEM
PUBLISHED BY: UNIVAIR

This package is designed for use by an independent insurance agency which handles both personal and commercial lines of property and liability insurance from various underwriters. Provisions are made for many different rates of commissions payable to an agency by a single underwriter, depending upon the type of coverage offered. Complete office file setup is provided, along with commission rates to be paid to each individual producer, and automatic file scanning for policy renewal notices which have to be generated. A receivables package prints out monthly statements on amounts due on commercial insurance lines, and lists the commissions due from underwriters on renewals from personal insurance lines. Client data and policy entries and renewals are all handled on video screen with extremely easy editing. Report sections include: current policies, customer master alphabetic and/or numeric, agency commissions earned MTD/YTD by underwtier, producer commissions earned MTD/YTD, master list of underwriters and types of coverages available, loss history files, and an inter-office assignable insurance code system. Will operate completely stand-alone, or can post into our General Ledger Package for automatic double entry accounting.
PRICE: $750/20

TITLE: ACCOUNTING SYSTEM
PUBLISHED BY: PEACHTREE SOFTWARE

The Peachtree/40(TM) Accounting System is organized into four packages — General Ledger, Accounts Receivable, Accounts Payable and Payroll. You may install a package to serve your specific needs by selecting any combination of the four packages or a fully integrated system consisting of all four.

GENERAL LEDGER — The General Ledger is the heart of the total accounting system. It keeps a detailed record of all financial transactions, and generates the balance sheet and income statement to provide timely information on the financial status of your company.

ACCOUNTS RECEIVABLE — Accounts receivable is a complete invoicing and monthly statement generating package that keeps track of the current and aged accounts receivable. A customer file is maintained including credit information and account status. The current status of any active account i instantly available.

ACCOUNTS PAYABLE — The Accounts Payable package keeps track of current and aged accounts payable and incorporates a check writing feature. It maintains a complete vendor file with information on purchase orders and discount terms as well as active account status.

PAYROLL — The payroll package prepares the payroll for hourly, salaried and commissioned employees while accumulating the necessary information for tax reporting. It generates the monthly, quarterly and annual returns to be filed with local, state and federal governments. It also prepares employee W2's and maintains an up-to-date information reference for each employee. The package includes tables for federal withholding and FICA as well as withholding for most states and cities from precomputed or user-generated tables. It will automatically write payroll checks at the user's option.

For further information, visit your local Dealer, who will be glad to demonstrate the software, generate sample reports, and allow you to examine in detail the users guide.

TITLE: GENERAL LEDGER
PUBLISHED BY: PEACHTREE SOFTWARE

Timely, accurate, and well organized financial information keeps the manager in full control of his business. The system produces departmental and summary income statements in an easy-to-read format showing current and year-to-date amounts, percentages by category, and, optionally, budget and comparative data with the General Ledger one year ago.

Thorough, self-instructing User's Manual.

An audit trail facilitates review and justification of statement amounts.

System cross-checks, running balance totals, prompting messages, and input validity tests help the operator make correct entries the first time through and minimize time-wasting out-of-balance problems at month end.

Flexible statement and chart of accounts make the system readily adaptable to most companies' needs.

User-defined 5-digit account number including optional 2-digit department code.

Summary transaction from other Peachtree/40(TM) accounting packages are accepted automatically by the General Ledger system.

SYSTEM STRUCTURE:

Outputs — • Trial Balance • Balance Sheet • Income Statement • Department Income Statements • Comparative Balance Sheet • Comparative Income Statement • Various Transaction Registers • File Listings • Control Reports

Programs — • Account Maintenance • Account List • Enter Transactions • Transactions Register List • Account Status • Generate Financial Reports • Accounting Transactions Transfer • End-of-Period Processing • General Utility Functions

TITLE: ACCOUNTS PAYABLE
PUBLISHED BY: PEACHTREE SOFTWARE

Cash management is a primary benefit; the system forecasts cash requirements based on discount dates or due dates and ages past-due payables. The user may examine these reports, specify vouchers or vendors to be paid or not paid, specify voucher dates through which to pay, then view the total cash needed for his selections and adjust as necessary to match funds available. Using this system one can often increase discounts taken and reduce the cash tied up in operating accounts.
Thorough, self-instructing User's Manual.
Regular monthly notes and payments are vouchered automatically to insure their not being overlooked.
Year-to-date purchases and latest payments are summarized by vendor for management's analysis and control of buying activities.
Routine calculations, preparation of checks, and compilations of management reports are handled by the system while office personnel are engaged in more productive tasks.
Each invoice may be vouchered as received to minimize handling and maintain tight control.
The accounts payable journal entry is prepared for direct posting to the books. Debits and credits by account can be passed automatically to the Peachtree/40(TM) General Ledger software.
Flexible design accommodates most companies without expensive customer modifications. Instructions, prompts, and helpful messages on the video terminal lead the operator through the system activities.
SYSTEM STRUCTURE:
Outputs — • Vendor File List • Open Vouchers • Accounts Payable Ageing • Cash Requirements • Check Register • Checks • G/L Transaction Register • Control Reports
Programs — • Vendor Maintenance • Vendor List • Enter Vouchers • Enter Credits • Report Generation • Decide Vouchers to Pay • Print Checks & Check Register • Display Vendor Status • End-of-Period Processing • General Utility Functions
For further information, visit your local Dealer, who will be glad to demonstrate the software, generate sample reports, and allow you to examine in detail the users guide.

TITLE: ACCOUNTS RECEIVABLE
PUBLISHED BY: PEACHTREE SOFTWARE

Converting excess receivables to cash while maintaining good customer relations is the goal of this system. Timely and accurate invoices and statements, ready access to up-to-date customer information, and ageings by account enable the businessman to (1) speed collections and (2) spot potential losses early enough to take corrective action.
Thorough, self-instructing User's Manual.
Open-item statements facilitate accurate posting of payments and readily justify amounts due.
Handles a mix of open-item, balance forward and auto-billing customer types.
Sales or dun messages may be printed on statements; optional message may print on invoice.
Tedious calculations, postings, preparation of statements, and compilations of summaries are performed by the system while office personnel perform more productive tasks.
The accounts receivable general ledger entries can be passed automatically to the Peachtree/40(TM) General Ledger software.

Flexible design accommodates most companies without expensive custom modifications. Instructions, prompts, and helpful messages on the video terminal lead the operator through the system activities.
SYSTEM STRUCTURE:
Outputs — • Customer Account Detail • Ageing Report • Transactions Register • Customer Accounts Listing • G/L Transactions Register • Invoices • Statements • Control
Programs — • System Setup • Customer Maintenance • Display Customer Status • Enter Transactions • Invoice Generation • Statement • End of Period Processing • Ageing Report • Transactions Report • Customer Account Report
For further information, visit your local Dealer, who will be glad to demonstrate the software, generate sample reports, and allow you to examine in detail the users guide.

TITLE: PAYROLL
PUBLISHED BY: PEACHTREE SOFTWARE

Tedious calculations, typing of checks, and compilation of data for federal reports are handled automatically by the computer; office personnel can spend their time on productive tasks.
Thorough, self-instructing User's Manual.
Accuracy of calculations and summaries is ensured by the software's ability to cross-check totals and reject improper inputs.
Accessibility of payroll information is enhanced by (1) well organized summaries and (2) a system feature by which any employee's file can easily be reviewed and updated from the terminal.
The payroll journal is prepared for direct posting to the books. Debits and credits by account can be passed automatically to the Peachtree/40(TM) General Ledger software.
Tax tables are in a separate file for easy updating as rates change. The system will handle most state and local withholding calculations through User-generated tables.
Flexible design accommodates most companies without expensive custom modifications.
SYSTEM STRUCTURE:
Outputs — • Employee File List • Tax File List • Payroll Register • Paychecks • G/L Transactions Register • G/L Transfer File • 941 Report • W-2 Forms
Programs — • Calculate Regular Payroll • Print Paychecks • Print Payroll Register • New Period Initialization • End-of-Month Report & Backup • End-of-Quarter and 941 Report • End-of-Year & Print W-2's • Employee Maintenance • Tax Maintenance
For further information, visit your local dealer, who will be glad to demonstrate the software, generate sample reports, and allow you to examine in detail the users guide.

TITLE: INVENTORY
PUBLISHED BY: PEACHTREE SOFTWARE

The success of sales and distribution businesses is largely a function of their inventory control skills. The system produces information that assists management in maximizing inventory turns and hence return on investment.
A detail report contains comprehensive data on each item, including pricing, sales history, and ordering information.
The availability of an item can be checked quickly using the status report which shows units on hand.
The transactions program allows for rapid entry of sales, receipts, and adjustments and produces summaries for managemnet review and control.
The physical inventory worksheet allows for easy comparison of actual quantities with book quantities.
Will automatically flag items to be reordered; contains multiple prices for each item.
SYSTEM STRUCTURE:
Outputs — • Inventory Status Report • Department Summary • Reorder Report • Detailed Inventory List • End-of-Period Report • End-of-Year Report • Physical Inventory Worksheet • Inventory Price List
Programs — • Inventory File Maintenance • Report Generation • Transactions Processing • End-of-Period Processing
For further information, visit your local dealer, who will be glad to demonstrate the software, generate sample reports, and allow you to examine in detail the users guide.

TITLE: MAILING LIST
PUBLISHED BY: PEACHTREE SOFTWARE

Keeps track of name and address information and allows the selective printing of this information in the form of mailing lists or address labels.
Simple to use, yet contains a number of very sophisticated features which allow the user to tailor the system to his own particular requirements.
SYSTEM FEATURES:
EASY TO USE PROGRAMS. All programs are interactive and are written to lead the user in a step by step fashion while carefully editing each keyboard entry for accuracy.
AUTOMATIC SORTING OF DATA. Sophisticated indexed file management routines allow the name and address information to be sequentially retrieved and printed without actual file sorting, thus saving both process time and diskette space.
FLEXIBLE ADDRESS SELECTION CRITERIA. The user may define up to twelve fields for each address record and then select that record to print out by including, or excluding, any of these fields.
USER-DEFINED FORMAT AND PRINTOUTS. The system uses a special Format File which tells the program how to print the mailing list or address labels onto paper. Several standard Format Files are included with the system, or the user may define his own format by following instructions provided with the system.
ADDRESS RECORD ORGANIZATION
Name — Up to 25 Characters
Address Line 1 — Up to 25 Characters
Address Line 2 — Up to 25 Characters
City, State — Up to 20 Characters
Zip Code — 5 Digits
External Code — Up to 12 Characters
Select Code — Up to 12 Characters
SYSTEM FUNCTIONS
• Build Address File • Open Address File • Add Address Record • Change Ad-

dress Record • Delete Address Record • List Address Records
For further information, visit your local Dealer, who will be glad to demonstrate the software, generate sample reports, and allow you to examine in datail the users guide.

TITLE: TEXTWRITER III
PUBLISHED BY: ORGANIC SOFTWARE

ORGANIC SOFTWARE'S TEXTWRITER III is a powerful text formatting program that is the ideal enhancement to most word processing systems such as WORDMASTER, ELECTRIC PENCIL, and WOARDSTAR. It provides you with the ability to print personalized form letters, reports and manuals, contracts and specifications, books and articles.
PERSONALIZED FORM LETTERS — Prints one copy of letter for each name on list while automatically inserting names and addresses. Can use account numbers, account balances, etc., instead of names and addresses.
REPORTS & MANUALS — Automatically creates a table of contents, an alphabetized index, and prints all footnotes. No need to manually change the contents or index everytime a small change is made.
CONTRACTS & SPECIFICATIONS — Frequently used paragraphs or phrases are stored in files and automatically inserted by name as the document is printed.
BOOKS & ARTICLES — Footnotes collected and printed at bottom of page. Optional chapter and page numbers. Chapters can be kept in separate files for easy editing and linked together when printed.
Available for CP/M, TRS-80 CP/M, TRS DOS, NEW DOS, NORTH STAR DOS and MICROPOLIS MDOS.

TITLE: MOONSHADOW TEXT FORMATTER/for UCSD Pascal™
PUBLISHED BY: MERRIMACK SYSTEMS

The UCSD Pascal™ system contains a screen-oriented text editor which is convenient, but which is not suited to word processing. It cannot underline, paginate automatically, or perform other essential text-processing functions. The MOONSHADOW TEXT FORMATTER (MTF) from Merrimack Systems solves this problem.
With the MOONSHADOW TEXT FORMATTER. documents produced with the screen editor are *post-processed* to provide these missing functions. It takes standard Pascal text files, operates on them, and sends fully formatted text output to the console display. a printer, or a disk file.
MOONSHADOW TEXT FORMATTER provides, in addition to a full range of formatting functions, *advanced features* including the combination of files into one document, variables in text (for form letters), and output character translation.
The MOONSHADOW TEXT FORMATTER is written in UCSD Pascal™, and is available for North Star Apple II, LSI-II, and 8080/Z80 systems with IBM Format 8" floppy disks.
PRICE: $125.00

TITLE: T.I.M.
PUBLISHED BY: INNOVATIVE SOFTWARE

T.I.M., Total Information Management. One of the most comprehensive data base management programs on the market.
Menu-driven and user-oriented. Extensive computer expertise is not needed.
Contains 4 user libraries. Any number of file formats, report formats, list formats, and record selection formats may be stored.
Contains a unique text-editor that may incorporate field information from the data base to write checks, invoices, form letters. etc.
Eliminates resorting of data files by automatically merging new or up-dated records back into the host file.
Supplied with a 125-page reference manual with over 30 pages of examples.
Available under Micropolis BASIC and CP/M MBASIC.

TITLE: COBOL-80
PUBLISHED BY: MICROSOFT

Virtually the only choice for serious business data processing. It's ANSI 1974 standard COBOL, with many user-oriented features added: formatted screen suport for CRT terminals, simple segmenting of very large programs, powerful file handling capability, trace debugging, and much more. A separate Sort package is coming soon.
FORTRAN-80 and COBOL-80 are just two more reasons why the Apple with Soft-Card is the world's most versatile personal computer. Get all the exciting details from your Microsoft dealer today. And start getting beyond the BASICs.

TITLE: TINY-C TWO
PUBLISHED BY: TINY-C ASOCIATES

Tiny-c two is ten times faster than tiny-c one, with many features, including long (32 bit) integers, lots of new operators, and redirectable and direct access input/output. Viable for professional work, either systems programming or business applications.
It comes with a UNIX™ style command interpreter called the "tiny-shell"™. Every compiled tiny-c program becomes a new shell command. Commands can have arguments, and dash(-) options, just as real UNIX shell commands do. The [and] input/output redirection operators are supported.
Fifty standard library functions, and readily extended. The input/output functions are UNIX styles, including fopen, fprintf, etc. Both ascii and raw (binary) input/output are supported.
Package is portable. Bringing it up on a new processor or new operating system should take just days. And as usual with tiny-c products, all the source code is included.
Tiny-c two is available now on standard 8" CP/M.
PRICE: $250.00, includes Owners Manual and Disk, $50.00 Manual Only.

The original tiny-c ONE is still available on a wide variety of cassettes and diskettes. This version is an interpreter, complete with a Program Preparation System. Disk or cassette versions $100 (this price includes the Owners Manual, available separately at $50). Disks: CP/M, Apple DOS 3.2, H8/89HOS, PDP-11, Flex 2.0, Northstar, DOS, Cassettes: KIM, SYM, TRS-80, Tarbell, Cuts.

TITLE: FORTRAN-80
PUBLISHED BY: MICROSOFT

A complete ANSI-standard FORTRAN (except COMPLEX type), with important enhancements. The extremely fast compiler performs extensive code optimization, and, since it doesn't require a "P-code" interpreter at run time, your programs will typically execute 2-3 times faster than with Apple FORTRAN.
FORTRAN is easy to learn if you know BASIC, and the package includes a huge library of floating point, math, and I/O routines you can use in all your programs.

TITLE: Z-TERM
PUBLISHED BY: SOUTHWESTERN

A flexible communications package for the Apple II equipped with Z80 Software and the CP/M environment. Allows file transfers to or from all types of dial-in systems. Fully supports Micromodem II and most other communication devices, as well as 80 column display boards and external terminals! Utilizes standard CP/M sequential text files, with up to a 40K internal buffer (using additional RAM or language card.) Supports multiple modes of data transfer and includes keyboard macros, auto-dial (with Micromodem II), and upper/lower case. On 16 sector diskette.
PRICE: $74.95

TITLE: INSOFT ACCOUNTING SYSTEM
PUBLISHED BY: INSOFT CORPORATION

Thanks to the Z-80 Softcard™ by Microsoft, this software is available to Apple owners for the first time. It uses the standard Apple 40 character display, does not require an extra 16K memory card to run. All you need is an Apple II or Apple II Plus with 48K RAM, 2 drives, the Microsoft Z-80 Softcard™, DOS 3.3 and a 132 column printer. We supply all programs, manuals and sample company data files to get you up and rolling fast.
GENERAL LEDGER — Will automatically post end of month transactions from A/R, A/P, and Payroll. Prints detailed company and department reports, optional comparative financial statements with current, YTD, budget, and last year (month and YTD) giving values and percentages.
ACCOUNTS RECEIVABLE — Instant customer account information (current and aged) with complete invoicing with open item and statement capabilities.
ACCOUNTS PAYABLE — Tracks current and aged payables. Has extremely useful cash flow management reports.
PAYROLL — Calculates payroll for every type of employee while maintaining monthly, quarterly and yearly totals for reporting purposes in multiple states. User modifiable tax tables. W-2, 941's, etc.
MANUALS — Comprehensive user manuals for each module with start up aids, 290 pages.
PRICE: $365

TITLE: MASTER TAX
PUBLISHED BY: LIFEBOAT ASSOCIATES

Professional tax preparation program. Prepares schedules A, B, C, D, E, F, G, R/RP, SE, TC, ES and forms 2106, 2119, 2210, 3468, 3903, 2441, 4625, 4726, 4797, 4972, 5695 and 6251. Printing can be on readily available, pre-printed continuous forms, on overlays, or on computer generated, IRS approved forms. Maintains client history files and is interactive with CPAids GENERAL LEDGER II
PRICE: $995/$30
$350, Annual Update Fee

TITLE: MICROSTAT
PUBLISHED BY: ECOSOFT

MICROSTAT, the most powerful statistics package available for microcomputers, is completely file-oriented with a powerful Data Management Subsystem (DMS) that allows you to edit, delete, augment, sort, rank-order, lag and transform (11 transformations, including linear, exponential and log) existing data into new data. After a file is created with DMS, Microstat provides statistical analysis in the following general areas: Descriptive Statistics (mean, sample, and population S.D., variance, etc.), Frequency Distributions (grouped or individual), Hypothesis Testing (mean or proportion), Correlation and Regression Analysis (with support statistics), Non-parametric Tests (Kolmogorov-Smirnov, Wilcoxon, etc.), Probability Distributions (8 of them), Crosstabs and Chi-square, ANOVA (one and two way), Factorials, Combinations and Permutations, plus other unique and useful features.
MICROSTAT requires 48K, Microsoft MBasic with CP/M and is sent on a single-density 8" Disk.
PRICE: $250.00, $15.00, Users Manual

TITLE: NURSING HOMES
PUBLISHED BY: BEACHWOOD SOFTWARE DIVISION

Beachwood software is for nursing homes and other long-term care facilities. It keeps patient statistics, and spending accounts, and provides other business accounting functions. It will handle the New York State Chart of Accounts. The software will operate on microcomputers using CP/M or CP/M-compatible system software.

TITLE: PAYROLL FOR MICROCOMPUTERS
PUBLISHED BY: COMPUTER SERVICES

Master Accounts Payroll software keeps payroll records and prepares local, state and Federal tax returns, W-2 forms, and payroll checks. The software operates on microcomputers compatible with CP/M system software.
PRICE: $100

TITLE: REAL ESTATE MANAGEMENT
PUBLISHED BY: KEY SYSTEMS, INC.

The Key Real Estate Management software package is designed to contro listings, sales, escrow accounts, and to perform property management anc general ledger functions. Accounts payable and payroll programs are alsc available. The package is for microcomputers that use CP/M system software.

TITLE: THE CONFIGURABLE BUSINESS SYSTEM (CBS)
PUBLISHED BY: LIFEBOAT ASSOCIATES

A data management system that allows true transaction processing. Custom accounting systems for payables, receivables, inventory control, order entry and general ledger can be set up without using any programming languages.
CBS defines an application such as an inventory control system by specifying master files to describe the inventory, customer and vendor files. Transaction files describe activities such as purchases and sales. A data entry program enters information about customers, vendors, inventory, sales and purchases. After data entry is complete, an update program can process the transactions against the various master files, updating account balances and inventory quantities.
The system features a comprehensive report generator which produces invoices, purchase orders, re-order reports, mailing labels or other special reports specific to the application.
CBS requires CPM compatible system and at least 48K of memory. It does not require any support languages. Documentation and a demonstration inventory system are supplied.
PRICE: $295

TITLE: CP/M TO APPLE CP/M
PUBLISHED BY: COMPUTER SHACK

CP/M TO APPLE CP/M will transfer your CP/M programs to Apple CP/M (or other way) for only $10 per program or file. COM, TEXT or BAS. One day turnaround. Discounts available. Master Charge/VISA. Send 5 inch or 8 inch in 3740 or IM-DOS format. $4 for Apple diskette. UPS free! Computer Shack, 1635 S. Prairie, Pueblo, CO 81005, (303) 564-3545.

TITLE: CP/MODEM
PUBLISHED BY: INFORMATION ENGINEERING

A software package that expands the communications capabilities of CP/M-based computer systems. It is distributed as object code on five-inch or eight-inch floppy disks in CP/M format.
PRICE: $300

TITLE: DATEBOOK
PUBLISHED BY: ORGANIC SOFTWARE

Datebook manages time in a similar manner to the common office appointment book but with the speed and accuracy of a computer. It maintains a record of appointments for up to three people (or three rooms) for an unlimited time in the future. Datebook is ideal for doctors, dentists, lawyers, salesmen, repairmen, or in any situation where time management is critical to office efficiency.
Datebook was written for use by people with no computer background at all. It is easy to learn but still fast and efficient for an experienced professional, the company said. All operator entries are checked for validity as they are entered in order to eliminate errors. The appointment data is stored on disk and a condensed calendar is kept in memory for fast access to the limited information needed for searching for appointment openings.
The operator works from a main option menu that appears at the bottom of a display of the day's appointments. Menu items include: appointments, scheduling, cancelling, modifying and rescheduling; searching for all appointments for a specified person; scanning for openings that satisfy a set of arbitrary constraints; inspecting appointments for days in the future; and printing a day's appointments.

Appointment openings are found at computer speed eliminating the frustrating and time consuming chore of paging through a book searching for an opening to fit a client's request, the company said.
Datebook finds openings that fit time of day, day of week and day of year constraints. It eliminates the disadvantages of a paper appointment book. Appointments are modified or cancelled with only a few key strokes. Clean copies of a day's appointments can be printed for each office worker or saved as a permanent record.
Datebook was written in Pascal and is available to run on CP/M and its derivatives, as well as USCD Pascal systems. it is available for immediate delivery.
PRICE: $295

TITLE: GENERAL LEDGER II
PUBLISHED BY: LIFEBOAT ASSOCIATES

Designed for CPA's. Stores complete 12 month detailed history of transactions. Generates financial statements, depreciation, loan amortizations, journals, trial balances, statements of changes in financial position, and compilation letters. Includes payroll system with automatic posting to general ledger. Prints payroll register, W2's and payroll checks.
PRICE: $450/$30

TITLE: JOB COSTING
PUBLISHED BY: MICROCOMPUTER CONSULTANTS

Designed for CP/M systems, it provides a job analysis report, showing the ratio of costs to income by job; job budget report, comparing actual expenditures with the amount budgeted; and class analysis report, showing costs by classification across all jobs.
PRICE: $600

TITLE: JOB-COSTING PACKAGE
PUBLISHED BY: ARKANSAS SYSTEMS, INC.

This job-costing package consists of a reporting facility, a job-costing accounts payable, and a job-costing payroll.
These programs are designed to run on a Z80 or 8080 processor using the CP/M operating system. Other CP/M-like systems are also supported. The software will run on hard or floppy disks. The business applications are integrated, yet will run singly.
PRICE: $700

TITLE: HIERARCHICAL DATA BASE SYSTEM/HDBS
PUBLISHED BY: MICRO DATA BASE SYSTEMS, INC.

A major breakthrough in data handling for micros! At best, existing programming languages provide only rudimentary file handling capabilities. With HDBS (Hierarchical Data Base System), you can now transform your programming language from an ordinary file handling system into a flexible, powerful, and productive data base management system.

HDBS provides the two components any genuine data base system must have:
1) The data Description Language (DDL), an easy-to-use, stand-alone language for specifying blueprints or schemas of data base organization.
2) The Data Manipulation Language (DML) for manipulating (storing, accessing, modifying, deleting) data organized according to a data base blueprint. The DML extends your data handling capabilities by allowing you to embed powerful data manipulation commands in the programs you write. The commands are stated through the "CALL" facilities of your programming language.

HDBS users are...
- free of the need to design files.
- free of the need to merge files; there is no scattering of data over several files. Records of many different types are automatically maintained in a single, integrated organization ... one that can be spread over numerous disk drives.
- free of the need to be concerned with disk I/O because it is handled automatically by HDBS.

HDBS offers...
- hierarchical schema designs.
- data base schemas of up to 254 record types; each record type may contain up to 255 fields. The size of a field may be up to several thousand bytes in length.
- data bases spread over one to eight disk drives. HDBS is independent of the sizes and types of drives.
- user-defined names for fields, record types, and sets.
- records maintainable in several sorted orders ... and in other orders as well.
- written in machine language for maximum execution efficiency and minimal memory usage.
- available versions: Z80 (requires approx. 18K) 6502 (approx. 26K), 8080 (approx. 22K). Total memory requirement must allow for buffer areas.

HDBS can be used to extend any of the following programming languages under the indicated operating systems;
CP/M with CBASIC; Microsoft BASICs, FORTRAN or COBOL; InterSystem PASCAL/Z; Sorcim PASCAL/M; Micro Focus CIS COBOL; Digital Research PL/I
MVT/FAMOS with BASIC
OASIS with BASIC
TRSDOS and NEWDOS (Models I and II) with Disk BASIC
North Star DOS with North Star BASIC
Apple DOS and Applesoft BASIC
Machine Language interface available on all above systems.

Note: Because HDBS can be integrated with a wide range of languages and operating systems, it provides uniform methods of data handling across those many languages and systems.

HDBS/QRS. An interactive Report-Writer/Query-System with these features:
- complex retrival conditions may be specified.
- detailed reports can be quickly generated.
- wildcard and "match-one" string specifications included.

HDBS/SRS. This Schema Redesign System permits ...
- renaming fields, record types, sets.
- adding new fields to existing record types.
- allocating additional pages to an existing data base.

TITLE: REAL ESTATE SOFTWARE PACKAGE
PUBLISHED BY: KEY SYSTEMS, INC.

According to the company the Key Realty Management System provides the real estate executive with immediate, up-to-date information regarding the status of his/her operation. It is a combination of easy-to-use, fully documented software, created for real estate decision makers. Since no special codes, abbreviations or 'computerese' appears to the user, no data processing expertise is necessary to get full benefits from the system, the company said.

The system is comprised of five control subsystems including Listing Control, Escrow Control, Sales Control, General Ledger and Property Management. Optional subsystems for Accounts Payable and Payroll are also available. The minimum system provides for up to 300 listings, 100 sales associates and 10 offices or sub-offices.

Listing Control, one of the primary information centers required in successful real estate operations, is provided to the realtor in a simplified form, the company said. By merely entering appropriate identifier, the realtor sees at a glance a full description of a property including dimensions of every room, floor and wall converings, special built-in equipment, and important sales features such as location, type of property (e.g. Ocean Front).

Sales Control records the following data for each month for every salesperson and office in both volume and quantity: new listings, accepted contracts, closures, relocation commissions, commissions from listings, commissions from sales and all activities monthly for 12 consecutive months plus year-to-date, as well as this month, year-to-date, this month last year and last year to date.

Property Management is ideal for realtors engaged in professional management of an owner's property, the company said. Included are all necessary income and expense reports as well as the ability to handle up to 52 different rentals of a single property annually.

The Key Realty Management System is available from computer retail outlets across the country or directly from Key Systems, Inc.

PRICE: $2500, Basic System
$500, each subsystem, as well as optional Accounts Payable and Payroll.

TITLE: SPELLGUARD
PUBLISHED BY: INNOVATIVE SOFTWARE APPLLICATIONS

A revolutionary new computer program that finds spelling mistakes and typgraphical errors in documents prepared with CP/M compatible word processors and text editors.

In less than one minute, SPELLGUARD proofreads 20 pages of text (10,000 words) and identifies all misspelled or mis-typed words based on its 20,000-word dictionary. After proofreading, SPELLGUARD asks the operator to review words identified as potential errors and judge each as correct or incorrect. Correct words may be added to the dictionary. SPELLGUARD marks incorrect words in the text so the operator can use a word processor or text editor to easily find and correct them.

SPELLGUARD is Easy to Use

- full proofreading capabilities are mastered after a few minutes of instruction.
- comprehensive user's manual contains step-by-step examples of all SPELLGUARD features.

SPELLGUARD is Powerful

- text files to 85 pages (CP/M 1.4), and 2,800 pages (CP/M 2.0).
- includes a 20,000-word, expandable dictionary.
- contains powerful commands to construct customized dictionaries for special areas, e.g., medicine, real estate, law, insurance, engineering.

SPELLGUARD is Reliable

- thoroughly tested in actual use.
- 30-day money-back guarantee.

Minimum System Requirements: 8080/85, Z80 CPU with 32K memory: CP/M 1.4 (dictionaries to 256 K bytes) or CP/M 2.0 or later (dictionaries to 8 MB); 8" floppy drive (single density. CP/M and Shugart compatible); word processor or text editor compatible with SPELLGUARD (currently WordStar, Wordmaster, Magic Wand, Electric Pencil, and ED).

The price of SPELLGUARD includes rapid turnaround and delivery by UPS blue label or airmail. Sales will be made only if the purchasers' word processor is compatible with SPELLGUARD. Software license agreement is required.



TITLE: PAYABLE PACKAGE
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

The Graham-Dorian Accounts Payable Package is part of the complete system of Grahm-Dorian accounting packages. It will stand alone or tie to the general ledger package. An entry to the accounts payable package will automatically update the general ledger package.

Capabilities include:
Vendor look-up and change, with complete account detail.
Vendor list.
Entering vendor invoices.
Writing checks (many options available).
Aged accounts payable report - cash flow analysis.
Accounts payable check register.
Built-in back-up procedure.

Accuracy is assured:
All responses are verified before they are entered to the files.
Paper audit trials are available where applicable.
Complete transaction detail is available for current and previous period.

Flexible:
Invoices can be spread to multiple general ledger accounts.
Allows for flexible cash flow analysis for four different user-defined periods.
Allows for flexible check writing - a check can be written to a specific vendor for specified invoices, can partial pay a specified amount and discounts can be taken.
Can pay all vendors for all invoices due between any two dates.
Can except vendors from that list that you don't want to pay.
Flexible recording of vendor invoices can specify discounts by percentages and dollar amounts, due dates, etc.

Powerful:
One 8" single-density disk will accommodate data storage for 300 vendors and 1000 open invoices.
(Also available on various mini-floppy formats.)
Also can be used on various hard disk systems

TITLE: RECEIVABLE PACKAGE
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

The Graham-Dorian accounts receivable package is part of the complete system of Graham-Dorian accounting packages. It will stand alone or tie to the general ledger package. An entry to the accounts receivable package will automatically update the general ledger package.

Capabilities inlcude:
Customer look-up and change, with complete account detail.
Master accounts receivable customer list.
Entering customer invoices.
Entering payments to invoices (many options available).
Printing of statements.
Aged accounts receivable report.
Built-in back-up procedure.

Accuracy is assured:
All responses are verified before they are entered to the files.
Paper audit trails are available where applicable.
Complete transaction detail is available for current and previous period.

Flexible:
Open invoice system with flexible payment posting complete information on invoices, both past and present.
Retains information on when invoice was paid.
Will tell user date of last payment, amount paid, etc.
Invoices may be spread to multiple general ledger accounts.
Credit memos may be applied to invoices.
Automatically reports aging of accounts in up to four user-defined periods.
Flexible payment posting will allow for invoices to be written off in full or in part.
Cash may be applied to oldest invoices, automatically, if desired, giving the user one of the major advantages of a "balance forward" system.

Powerful:
One 8" single-density disk will accommodate data storage for 300 customers and 1000 open invoices.
(Also available on various mini-floppy formats.)
Also can be used on various hard disk systems.

TITLE: GENERAL LEDGER
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

The Graham-Dorian general ledger package is part of the complete system of business application packages that are interactive or will stand alone. A single entry will automatically update and post to the general ledger from the accounts payable and/or accounts receivable packages.

Capabilities include:
Account look-up and change with detail for current and previous month.
Chart of accounts (user-defined).
Recording journal entires (paper audit trial).
Transaction register.
Trial balance.
Financial statements.
Monthly closing.
Fiscal year closing.
Built-in back-up procedure.
Keeping 14 months' history.

Accuracy is assured:
All responses are verified before they are entered to the files.
Ledger cannot get out of balance.
Paper audit trials are available while in transaction activity.
Complete transaction detail is available for current and previous period.

Comprehensive:
Can compare this year's operation with last year.

Powerful:
One 8" single-density disk will accommodate data storage for 200 accounts and 2500 transactions.
(Also available in various mini-floppy formats.)
Can be used on various hard disk system.

TITLE: JOB COSTING PACKAGE
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

The job costing package is an application originally designed for the general contractor to run interactively with the Graham-Dorian accounting packages or stand alone. Because of the flexibility of the system, however, this package may be useful in a wide variety of applications. Since the user can enter and define

his or her own cost codes and jobs, this package can be used as a general job cost or cost accounting system in many businesses. An entry to the accounts payable or payroll II package will automatically update the job cost.

Capabilities include:
New job set-up.
Job look-up and change, with complete job detail available.
Job last report.
Entry of job cost transactions.
Cost code entry, look-up and change.
Job cost reports.
Actual versus estimated cost per job.
Built-in back-up procedure.

Job Cost report shows:
Detail expenses by job phase, cost code, and category.
Actual expense versus estimated expense for any cost code phase or job.
Total job cost for each job.

Flexible:
Jobs, phases, cost codes, and categories may be specified or defined by the user.
Up to 10 category subtotals may be defined by the user and are printed on a separate report for each job.
Complete detail may appear for each cost code or the user may opt to bring balances forward for any code, whenever desired.

Powerful:
One 8" single-density disk will accommodate data storage for 200 jobs and 3000 cost details.
(Also available on various mini-floppy formats.)
Also can be used on various hard disk systems.

TITLE: INVENTORY II
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

Inventory II is designed as a complete inventory control system for the distributor/wholesaler or manufacturer. The system will stand alone or interface with the sales order entry/invoicing package. When interfaced with order entry/invoicing, a complete system can be developed for manufacturers or distributors that will tie into accounts receivable and general ledger. For manufacturing systems, Graham-Dorian's bill of materials (parts explosion) package should be added as an option to inventory II. When inventory is used with order entry/invoicing, an entry to order entry automatically will make adjustments to the inventory.

Capabilities include:
Enter look-up and change a part, with detail of activity.
Printing inventory reports.
Printing list for physical inventory.
Enter purchase orders.
Enter receipts, withdrawals, or physical inventory.
Built-in back-up procedure.

Inventory reports available:

Master list	On Order report
Status report	Stock Out report
Reorder report	Sales report

Physical inventory report, with inventory list in location sequence.

Flexible:
Receipts or withdrawals may be entered directly to update quantity on hand.
With order entry/invoicing, when an order is generated, the inventory automatically reserves parts.
With order entry/invoicing, quantity on hand automatically is updated when orders are shipped.
When a purchase order is generated, the user may enter quantity ordered to keep track of the quantity on order for each part.

Powerful:
One 8" single-density disk will accommodate data storage for 400 to 500 inventory items.
(Also available on various mini-floppy formats.)
Also can be used on various hard disk systems.

TITLE: ORDER ENTRY/INVOICING PACKAGE
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

Order entry/invoicing package is designed for manufacturers or wholesalers/distributors. However, its flexibility permits it to fit some retail applications, too. Because of its nature, it will almost always be used with an inventory package or as part of a complete business system.
The order entry/invoicing will run interactively with Graham-Dorian's inventory II package, and will automatically post to the accounts receivable, if used. Also, it will prepare data to be entered into the general ledger.

Capabilities include:
Enter look-up or change, and invoice.
Print picking lists.
Print invoices.
Print invoice register.
Built-in back-up procedure.

Flexible:
If used with inventory II, the order entry program will put items on reserve.
If used with inventory II, the order entry program will remove items when shipped.
It can specify a shipping date, check to see if the order was shipped as originally entered, and then allow for last minute changes before shipping.
Will allow for non-inventory or miscellaneous items.
Picking list will include information on item location, and can be used as a packing slip.
Invoices may be printed individually or in batches.
Order may be flagged to show it already has been sent, and duplicate invoices may be printed.
Invoice register will give either a complete report or summary (what was on invoice, sales, tax, etc.)
Invoice register will prepare information to take to the general ledger.

Powerful:
One 8" single-density disk will accommodate data storage for 200 orders and 1000 line entries.
(Also available on various mini-floppy formats.)
Also can be used on various hard disk systems.

TITLE: PAYROLL I
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

Allows payroll verification.
Payroll calculations can be verified quickly. User may correct payroll data prior to the checks being typed.

Computes payroll information.
Figures FICA, federal and state withholding tax.
All state tax routines available.
Figures payroll tax deposit.
Manages medical and miscellaneous deductions.
Computes payroll for salaried and hourly employees.
Computes overtime.
Program allows for special payroll adjustments.

Types payroll checks and maintains information on checks.
Types out the numerical text as well as the numerical value on checks.
Types checks to one or all employees.

Allows for special checks.
Will allow add-on for bonus or extra pay (with deductions).
Handles special amount checks.

Maintains master file on all employees.
Allows for entry of new employee information.
Allows corrections and changes to existing information.
Maintains information on terminated employees.
Moves terminated employees to a separate storage file.

Lists information on checks written.
Lists checks by number or date written.
Lists all check stub information.
Gives total payroll and breakout for up to six divisions after check listing.

Allows for extensive data printouts.
Prints out payroll register.
Prints quarterly report information.
Transfers quarterly information to backup file before zeroing master file quarterly information.
Prints W-2 forms.
Prints employee data by categories.

TITLE: CASH REGISTER
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

The cash register package is designed as a point-of-sale program for retail applications. It does not link the computer to any particular cash register; instead, it provides the computer with all the functions of the most sophisticated electronic cash registers. Typically, the video terminal would be located at the point-of-sale along with a cash drawer device. As an option, various printers may be used to print receipts or reports.
The primary purpose of this application is to link with an inventory program to provide a point-of-sale inventory control system. The package also may be of value to expand the uses of a system in a retail environment.
Program operates with user-defined parameters for categories, prices, drive location for files, and terminal/printer control codes.
Maintains files on the daily sales of an unlimited number of sales personnel. The user may define up to twenty-five different categories of sales. The program will automatically figure sales tax and change. The program allows both variable and fixed price categories.

Maintains file on gift certificates, lists information on gift certificates and the total outstanding amount of the gift certificate held by the purchaser, collects sales tax when gift certificate is sold and not when it is redeemed for merchandise.
Maintains separate daily sales files for each day. Types out daily sales report, total sales for each salesperson and total each category of sales for the day.
Files all information on refunds, who made the refund, who the refund was made to and the reason for the refund.
Files information on overrings, the reason for the overring, the amount of the overring, and the category in which the overrring was made.
Files all information on paid outs, who the paid out was made to, and the salesperson that made the paid out.
Allows tax-exempt sales.
Daily reports take into account total sales, overrings, refunds, and paid outs, and give accounting of the total net deposit. Program will give sales status at any time.

TITLE: APARTMENT
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

Maintains complete files on all residents of the apartment project. Daily reports listing:
vacancies,
late rents,
notices to vacate,
total security deposits in escrow,
income for the day,
income month to date,
income year to date,
total rent loss due to vacancies.
Provides a breakdown of income by number of categories, i.e.,
rent,
late rent charges,
damage deposits,
miscellaneous income,
pet deposits,
pool key deposits.
Checks and verifies that manager's totals match actual totals.
Checks for missing receipts.
Updates dates paid to by the amount of rent paid, even if an apartment project has every tenant paying a different amount for rent.
Stores all information on past tenants, including:
how much security deposit was forfeited,
why it was forfeited,
the condition of apartment when vacated,
length of residency,
list of residents that vacated between any two dates.
Maintains all financial information by month for comparison to same month last year and year to date for comparison to last year.
Enables the user to classify tenants, i.e.,
lists all type one residents,
list all type two residents.
Type one residents may be tenants that one leasing agent has rented to and type two residents may be tenants another leasing agent has rented to. These lists are ideal for comparing leasing agent one's screening to the screening process that leasing agent two employees before renting to a tenant.

Lists any category of residents and types letter and address labels to them, i.e.,
tenants with pets,
tenants with pets without a pet deposit,
tenants late on their rent,
any one or more combination of tenants.

Provides security listing of all residents, where they are located and a listing of all vacancies by type, i.e.,
one bedroom,
two bedroom,
three bedroom.

One 8" single-density disk will accommodate data sotrage for 400 apartments.

TITLE: DENTAL
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

This dental system is designed to be a comprehensive package for processing patient financial data for a dentist, whether in a general practice or a specialty. It consists of fourteen programs, and is written in CBASIC-2. The programs allow the user to maintain patient records of charges, payments, and insurance information. This system prints patient statements and standard forms for the American Dental Association. It also generates reports of delinquent accounts, daily transactions, and monthly transactions.
The programs are menu driven and parameterized for easy installation and use.

Basic description of each program:

Create Data Files — This program allows the user to create and determine the size of the files, on the system disk or the data disks. It indicates whether a particular file is present, and if so, which drive it is on.

Patient Master File Maintenance — Patient information, such as personal data, insurance information, and responsible party information, is entered, edited, deleted, and printed out using this program. The user can look up the data by patient name or number, and go directly from the look-up to posting or editing functions. This program also prints out a list of patient names in alphabetical order.

Procedure Code Maintenance — This program allows the user to display, add to, edit, or delete data in the procedure (ADA) code file. The numeric list of procedure codes may be displayed or printed out.

Enter Treatment/Payment Records — This is the primary program for entering charges, and payments, at the time of the visit. The patient number, date, and procedure codes are entered. The standard charge for the procedure is displayed. The operator may allow this charge, change it, and/or enter any payment.

Edit Treatment/Payment Records — This program displays the charges and payments for a patient in the order they were entered; and allows the user to edit any entries if necessary.

Post Payment On Account — Payments received (usually after the visit) are entered with this program, and applied first to the oldest charge, with any payment left over being applied to the next oldest charge until the payment is exhausted, or until the bill is paid. If a payment exceeds the total charges, this will be noted, and the excess will be applied to the last charge as a credit.

Responsible Party Maintenance — This is a list of insurance companies used by the patients. This list is coded by number, and may be viewed or edited.

Print Forms — This program prints out patient statements and standard insurance forms for the American Dental Association (ADA).

Miscellaneous functions — Use this program to make disk back-ups of system disks and/or data disks; to format new disks; to view data files; or to exit to the CP/M command mode.

Stats — The statistics program prints a report of delinquent accounts, a report of daily transactions or monthly transactions, and a list of patients having a particular insurance number. This program also allows the user to change "statement sent" flags, and to delete all paid-up charges in the treatment/payment file, making more space available in the files for future data.

Rebuild Patient Links — This program enables the user to recover a file that has been lost or garbled, such as by a power failure.

Rebuild Charge Links — This program enables the user to recover data in the treatment/payment journal. It rebuilds the link lists. (All data recovered may no longer be in chronological order.)

Rebuild Third Party Links — This program rebuilds the link lists in the responsible party file. It also puts the "Y" flags in order, which designate the first record in a patient's chain.

Change System Date — Allows the user to change the date, while checking the entered information for validity.

Create Screen Mask for User Terminal (CRT) — The last program enables the user to adapt the system to run on a different type of terminal if needed.

TITLE: MEDICAL
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

This medical system is designed to be a comprehensive package for processing patient financial data for a physician, whether in general practice or specialized. It consists of 15 programs, and is written in CBASIC-2. The programs allow the user to maintain patient records of charges, payments, and insurance information. It also generates reports of delinquent accounts, daily transactions, and monthly transactions.

The programs are menu driven and parameterized for easy installation and use.

Brief description of each program:

Create Data Files — This program allows the user to create and determine the size of the files on the system data disks. It indicates whether a particular file is present, and if so, which drive it is on.

Patient Master File Maintenance — Patient information, such as personal data, insurance information, and responsible party information, is entered, edited, deleted, and printed out using this program. The user can look up the data by patient name or number, and go directly from the look-up to posting or editing functions. This program also prints out a list of patient names in alphabetical order.

CPT Code Maintenance — This program allows the user to display, add to, edit, or delete data in the CPT (procedure) code file. The numeric list of CPT codes may be displayed or printed out.

ICDA Code Maintenance — The user can enter, edit, view, or print the ICDA (diagnosis) code file with this program.

Enter Treatment/Payment Records — This is the primary program for entering charges, and payments, at the time of the visit. The patient number, date, and ICDA and CPT codes are entered. The standard charge for the procedure is displayed. The operator may allow this standard charge, change it, and/or enter any payment.

Edit Treatment/Payment Records — This program displays the charges and payments for a patient in the order they were entered, and allows the user to edit

any entries if necessary.

Post Payment on Account — Payments received (usually after the visit) are entered with this program, and applied first to the oldest charge, with any payment left over being applied to the next oldest charge until the payment is exhausted, or until the bill is paid. If a payment exceeds the total charges, this will be noted, and the excess will be applied to the last charge as a credit.

Responsible Party Maintenance — This is a list of insurance companies used by the patients. The list is coded by number, and may be viewed or edited.

Print Forms — This program prints out patient statements and standard forms for Medicare, Medicaid, Champus, Blue Shield, and other insurance companies.

Miscellaneous Functions — Use this program to make disk back-ups of system disks and/or data disks; to format new disks; to view data files; or to exit to the CP/M command mode.

Stats — The statistics program prints a report of a delinquent account, a report of daily transactions or monthly transactions, and a list of patients having a particular insurance number. This program also allows the user to charge "statement sent" flags, and to delete all paid-up charges in the treatment/payment file, making more space available in the files for future data.

Rebuild Patient Links — This program enables the user to recover a file that has been lost or garbled, such as by power failure.

Rebuild Charge Links — This program enables the user to recover data in the treatment/payment journal. It rebuilds the link lists. (All data recovered may no longer be in chronological order.)

Rebuild Third Party Links — This program rebuilds the link lists in the responsible party file. It also puts the "Y" flags in order, which designate the first record in a patient's chain.

Change System Date — Allows the user to change the date, while checking the entered information for validity.

Create Screen Mask for User Terminal (CRT) — The last program enables the user to adapt the system to run on a different type of terminal if needed.

TITLE: SURVEYING
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

The Graham-Dorian surveying package is an application package designed for the surveyor who needs accurate and timely computations based on field data. The structure allows for great flexibility to meet the expanding needs of a surveying business.

Surveying programs can carry values to 14 digits, more precise than portable calculators. The programs should run on a 32K CP/M system; however, a 48K, is recommended.

Brief description of each program in the package:

Traverse program — Allows the surveyor to enter the field data of a traverse and any associated sideshots. Data then converted to coordinates that are stored on a disk file. Operator can access any traverse data previously entered, and display such information as traverse length, area of a closed traverse, closure information, accuracy/error of a closed traverse, or an inverse from any point or sideshot to any other point or sideshot in the traverse.

Stadia Reduction program — calculates the elevation of a point, and its horizontal distance from another point of known elevation.

Universal Triangle Solutions program — Computes unknown side lengths, angle sizes, and triangle area. All five possible combinations of known values can be computed to get the remaining (unknown) values. Combinations require only

three known values, such as side-side-side, angle-side-angle, etc.

Volume by Average End Area program — Calculates area of a cut or fill cross section by the average end method, using known values of the evaluation and offset of the points from the center line. Also computes separate totals for cut and fill volumes.

Circular Curve Solutions program — Computes the parameters of a circular curve, when two known parameters are entered.

Horizontal Curve Layout program — Uses field data to calculate the points at which a circular horizontal curve is to be staked out. The operator may request (a) chord distances for an offset curve, (b) the deflection angles, chord, and offset chord to any one station, or (c) all the stations from the beginning station of curve to the ending station of a curve.

Universal Intersections program — Calculates the point(s) of intersection when known data is entered, using one of three formulas; bearing-bearing, bearing-distance, or distance-distance. This program can also compute an area from the coordinates of the parameter points, and inverses from coordinates.

Vertical Curves and Grades program — Computes the elevation of any specified station along a vertical curve or grade. Also gives the station and elevation of the lowest (or highest) point on a curve.

Volume of a Borrow Pit program — Calculates the volume of an area to be filled or excavated. The method used is to divide the area into a series of triangles and rectangles based on a plane lying across the borrow pit, and cumulate the estimated area of each section.

Coordinate Transformation program — Computes the parameters necessary to convert the coordinates of a point in one system to coordinates in another system.

Create CRT Mask File program — Enables the user to adapt the system to run on a different type of terminal if needed.

TITLE: CBASIC-2
PUBLISHED BY: GRAHAM-DORIAN SOFTWARE SYSTEMS, INC.

CBASIC-2 is a comprehensive compiler/interpreter for use with the CP/M operating system. One of the many features that makes it particularly suited to business application programs is its speed — it runs five times faster than the original CBASIC! Also, it has a powerful and comprehensive print-using and formatting capability.

CBASIC-2 was created by Compiler Systems, Inc., formerly Software Systems, the people who created CBASIC-1. CBASIC-2 retains the extended features included in CBASIC-1, including, IF, THEN, ELSE and WHILE constructs and access to disk files. It also allows the use of 31 character variable names and the free use of comments, spaces, and tabs. These aid in creating programs that are self documenting and maintainable.

CBASIC-2 includes the use of integer variables, multiple line functions, and CHAINing with COMMON variables that allow many programs to run under a small menu.

CBASIC-2 consists of three (3) programs. The first program, CBAS2 Command, is the compiler. It converts the user's source language program into an immediate disk file. The second program, CRUN2 Command, is the run-time monitor. It directly executes the operations included in the intermediate file. The third program, XREF Command, is a cross-reference lister. XREF Command reads a source listing of a CBASIC-2 program and creates an alphabetical listing of all of the variables used in that program, the type of variable, and the line numbers in which each variable appears.

The use of integer variables increases program efficiency, increases the speed at which the program executes, and decreases the size of the INT file. The full CHAINing capability inherent in CBASIC-2 along with the ability to COMMON variables from one program to another are of great benefit to the user. CHAINing allows a series of smaller programs to be run in sequence or to be loaded by menu management programs. The COMMON statement carries numerical variables and string variables as well as arrays from one program to another. This saves time, as the user does not have to reassign the variables or arrays in each program run. The combinations of CHAINing and COMMON will allow the use of more sophisticated program structures in smaller memory systems.

CBASIC-2 includes machine language linkage statements and functions such as POKE, PEEK and CALL. Through the use of the SAVEMEM statement the user may reserve space for and load machine language subroutines during program execution.

One of the additional predefined functions in CBASIC-2 — making this package so user-oriented — is CONCHAR%. This function allows the input of a character from the console wthout a subsequent carriage return. This increases the ease and the efficiency of operation of application programs.

There are many other enhancements of CBASIC-2 too numerous to mention in this brief description. We at Graham-Dorian Software Systems feel that CBASIC-2 is the most comprehensive and powerful commerically oriented BASIC available today. This is why we have chosen it as the basis for our business application software.

TITLE: PEARL
PUBLISHED BY: COMPUTER PATHWAYS UNLIMITED, INC.

Let your business flow into the 1980's.
PEARL generates software tailored to specific business functions — your software problems will dissolve into solutions overnight. Accounts Payable? General Ledger? Appointment Management? PEARL generates the data fields, the edit routines, the input and output facilities.
PEARL is menu-driven and can be used by non-technicians. A novice can generate software in hours with PEARL — software that it might take a programmer months to write. Save months, or years, development time with PEARL.
PEARL is here now, for your projects. Use your time and energy to define what is needed to create business solutions and let PEARL solve the technical problems.
PEARL — Producing Error-free Automatic Rapid Logic — runs on most CP/M based computing systems.
PRICE:

PEARL Level 1	**$ 90**	**For Personal Computing**
PEARL Level 2	**$200**	**The Business Assistant**
PEARL Level 3	**$400**	**For Software Developers**
PEARL Level 4	**$800**	**For Turnkey System Developers**

TITLE: REFORMATTER™
PUBLISHED BY: MICROTECH EXPORTS

Reformatter™ diskette conversion software now includes 3 programs for transferring information bidirectionally via floppy diskette medium:
CP/M — DEC gives the CP/M user complete access to DEC formatted diskettes. Provides complete facilities for file reorganization and directory maintenance along with editing capabilities.
CP/M — IBM, the original Reformatter™ now available with enhanced features, gives the CP/M user complete access to IBM 3740 formatted diskettes. Provides complete facilities for character translation, file reorganization, and directory maintenance, along with editing capabilities.
REFORMATTER™ programs require a multiple drive system with at least one 8" single density drive. For detailed information contact MicroTech Exports, 467 Hamilton Avenue, Suite 2, Palo Alto, California 94301, 415/324-9114. CP/M is a registered trademark of Digital Research.
PRICE: $195.00

DATA BASE

Data Base Programs have many applications from Business to Personal, you can file, sort, shuffel and generate reports at your command. Data Base Programs allow you to organize material tailored to your specific needs and requirements.

Advanced Data Handler DB-1
Apple-DMS DB-1
Baclan File Helper DB-1
Cataloguer DB-2
Catalog Program DB-2
Catalog Writer DB-3
CCA Data Base Management System DB-3
The Creator DB-4
Data Base DB-5
Data Base DB-5
Data Base Management/Flexible Files DB-6
Data Base Management DB-6
Data Base Manager IFO - Programs DB-6
Data Base Management System DB-7
Data Factory DB-7
DataCope Text File Copy DB-8
Data-Flex-Data Management - Word Processing - Finance - Report Generation
Graphic Display DB-10
Data Handler, The DB-11
Data Manager DB-12
Data Management DB-12
Data Wrangler DB-12
DB Master DB-13
Desktop/Plan DB-14
Directory Manager, The DB-19
Filemaster I DB-19
Filemaster II DB-20
Filing System Cross Reference File DB-20
Information Master DB-21
Infotree DB-21
ISAM-DS DB-22
Mag Files for the Disk II DB-22
Mailing List Database DB-23
MicroInformation System DB-23
Modifiable Database DB-24
MFI Utility Diskette DB-25
Multifield Information System DB-25
PFS: Software and Program DB-25
Selector-IV (TM) DB-26
Transactor DB-26
Universal Data Base DB-27
Vendorfile DB-27
Whatsit DB-28
Databee™ DB-29
Data Manager: A Data Base Management System and Mailing List DB-29
The Microconductor™ DB-29
On-Line Database DB-30
Pascal Database DB-30

TITLE: ADVANCED DATA HANDLER
PUBLISHED BY: BUSINESS COMPUTER SERVICES CO.

Consists of four separate systems which can use the same data files. The Data Handler version II system performs data file creation and maintenance tasks including sorting by data fields. The Search system allows data file scanning and subfile creation. The Label system provides label generation from data files or keyboard entry. The Add system sums a numerical column of data in a file. All four systems are menu based for ease of use. The package includes a floppy disk, documentation, and example applications for APPLE computer systems.

TITLE: APPLE-DMS
PUBLISHED BY: PYGMY PROGRAMMING
MEMORY: 48K RAM
HARDWARE: DISK DRIVE

Apple-DMS is a data management system. Some features of Apple-DMS are:

- Up to 4 disk drives —3700000 bytes accessable
- User defines number of fields per record and length of each
- Three levels of security
- High-speed sorting and searching routines
- User defined print-out specifications with headings, paging and more

Apple-DMS uses some machine language coding, with the rest of the program written in "Unlistable BASIC." All functions are designed for each use and even those not familiar with computers will have little trouble with learning the system.

Apple-DMS has many applications including mailing labels, inventory, personnel data and other record keeping functions.

PRICE: $59.95

TITLE: BACLAN FILE HELPER
PUBLISHED BY: BACLAN
MEMORY: 48K, APPLESOFT, 32K, INTEGER BASIC

The FILE HELPER consists of five programs, supplied on a diskette, designed for processing of data using fixed record length disk files in a manner similar to that employed on much larger computers. The main functions are outlined below:

FILE BUILDER - A screen format data entry module for creating files or updating existing ones. To use this program, a special form is designed (and stored as a disk data fiel) for each separate application.

FILE COPIER - A utility for copying text data files. On a single drive system, a block of records is held in the computer memory while the user alternately inserts the original and destination diskettes. FILE COPIER permits copy of a portion of a file between two record numbers.

FILE SCANNER - A file dump (list) routine for direct display of text up to the first 233 positions of a record. Also allows for direct updating of file records and for finding specified characters (strings) within a file.

FILE SORTER - A program to re-order the records of a file based upon the ascending sequence of a "key", which is established by the user from the positions with in the file record. Primary and secondary sort keys are handled by this extremely fast routine (based on machine code version of Shell-

Metzner method).
In Addition to the above, a FILE PRINTER program is provided which permits user-selectable headers when listing file data to your printer (works with serial or parallel interface). The Applesoft version of FILE PRINTER also allows the user to select certain data fields for sum and average value statistics.

PRICE: INTEGER BASIC, 39.00
APPLESOFT, 55.00
DOCUMENTATION MANUAL, 5.00

TITLE: CATALOGUER
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K, APPLESOFT

Disk Cataloguer is a program designed to keep track of large diskette program bases. The program performs three functions:
Update of the master file
Search for a file
Display of current files in memory
The program consists of two sub-programs. One is the main disk utility software and the other is a link file called "RWDK LINK". Both are rquired in the managment of the disk base. Two files are created as a result of the data base. One is a large "B" file containing all information, the record is a pointer file. Depending on the size of the machine, the file can typically hold 1000 files in a 48K machine. The menu contains 5 options:
1) Update
2) Search
3) Display Catalog For Volume
4) List All Volumes
5) End
The Program initially adjusts itself to the machine in use.
PRICE: TAPE, 9.95
DISK, 14.95

TITLE: CATALOG PROGRAM
PUBLISHED BY: GEORGE W. LEE

Runs on I6K Apple in integer basic or 32K Apple II with disc. Data files constructed in core and then stored or retrieved from disc or tape. Suitable for cataloging books by title--author, records by title-artist, Apple programs by volume number-title-author etc. 40 column record per data item, 5 fields including two with adjustable sort by any one of four fields. Can search data base and list items matching specified field contents. Easy to use menus and prompts, field headings and prompts, easily adjusted for different records; such as books vs records. Includes documentation. Includes companion program, GENCPINP which automatically constructs ad data base of names of programs from the catalog information on a set of diskettes.
PRICE: I0.00

TITLE: CATALOG WRITER
PUBLISHED BY: COOK COMPUTER COMPANY

This stores data about programs on a disk and prints an annotated catalog of programs. The data entry program includes margin settings, right justifications, printing in two columns, and search on any of 14 fields. Upper and lower case entry and print-out is provided.
PRICE: Disk 19.95

TITLE: CCA DATA BASE MANAGEMENT SYSTEM
PUBLISHED BY: PERSONAL SOFTWARE, INC.
MEMORY: 48K

The CCA Data Management System stores and retrieves information. It is very simple to learn and use, and at the same time provides real data processing capabilities for you and your TRS-80 or Apple II.

You can computerize most, if not all of your record keeping. DMS will give you control over any type of information which lends itself to "row and column" storage, retrieval, and analysis.

If you are familiar with the concept of a computer "data base," the power and flexibility of the DMS will amaze you. If you are not familiar with "data base" operation, don't worry. It is logical and simple. A demonstration at your computer retailer will show you how the system can store, sort, update, and print all kinds of files. Files for your mailing list, accounts receivable or payable, customer list, expense reporting, budget analysis, or any report you need. The 130 page manual has full instructions plus samples for a mailing list and inventory application.

Here are the capabilities and features of the Data Management System. See for yourself how useful it can be for you.

DMS Features.

File Creation and Maintenance:

- Fields may be alphanumeric, numeric, integer floating point, or fixed decimal with commas.
- Fields may be COMPUTED FIELDS. DMS will compute any field within a record, using constants or other fields in the same record. Functions include add, subtract, multiply, divide, and raise exponential powers.
- Records are easily located, using the SCAN feature. SCAN for records with a field over, below, or between range of values.
- Records are easily added and updated. DMS "prompts" you with questions.
- Multi-diskette capabilities for larger files—up to 85,000 characters per file!
- Sort the records into almost any order, using up to 10 fields as "keys." So you can sort for customer numbers; within zip code, for instance.

- Delete records, "compact" files, and backup files on data diskettes easily.

Report Features:
- Print reports with records in any order.
- Select fields to be printed.
- Print mailing labels.
- Numeric totals and subtotals can be specified when a value in an unrelated field in the same record changes. For example, sort, subtotal, and print according to department, or month, or customer number, or model number.

Once you see DMS, you won't want to keep records by hand again. It is that simple. This is real data processing, delivered on a personal, down-to-earth level.
PRICE: $99.50

TITLE: THE CREATOR®
PUBLISHED BY: COMPLETE BUSINESS SYTEMS, INC.

High level language program generator develops complete program in "Basic". Enables ANYONE to write complete, running, debugged BASIC LANGUAGE Programs in 35 to 40 minutes with NO PRIOR PROGRAMMING KNOWLEDGE OR ABILITY.
IF you are one of the many who bought a microcomputer in the belief that with just a little studying you could write your own programs, you now know that you can't.
IF you, as a businessman, thought you could have stock software modified at a reasonable cost with reasonable results, you know that's not possible either.
IF you are a hobbyist getting tired of the untold hours it takes to write a program, only to find it takes more hours to debug than to write.
IF you are a skilled programmer you don't have to be reminded of the repetitious time spent on each new application.
IF you have left your micro-computer sitting somewhere gathering dust ... meet THE CREATOR® .
THE CREATOR® is not just another data base generator.
THE CREATER® , at your direction, makes complete running programs that are thoroughly documented, easy to modify at any time by YOU!
THE CREATOR® cuts programming time up to 90% for a skilled programmer.
THE CREATOR® will make anyone a skilled programmer in 30 to 35 minutes!
THE CREATOR® does the work! You can answer the simple direct questions and THE CREATOR® CREATES ... AND ALL IN BASIC LANGUAGE.
Q. After THE CREATOR® has produced a program, can it be modified?
A. Yes, the resulting program is modular, fully documented and readily accessible for alterations or deletions.
Q. Does the program created use so much disc space that there is very little space left for the record storage?
A. No, the code produced is extremely compact despite complete documentation. If requested THE CREATOR® will even "pack" or compress information. You may even delete the "remarks" making it even more space efficient.
Q. Must I be expert or even conversant with Basic Language?
A. No, all questions to and answers from the operator require no computer language knowledge, simple every day English will do.
Q. What about math ability?

A. If you can count your fingers and toes, you'll have no problems.
Q. Will the programs which I produce with THE CREATOR® be bulky, slow or amateurish?
A. No, the resulting programs will be sophisticated and extremely fast operating. For example, should you create a mailing list or inventory program, the time for any record to be retrieved and displayed from a full disc would take a maximum of 1 second.
Q. Must the programs produced conform to a pre-determined format and file length?
A. No, you determine format and file size to fit your requirements. You may have as many as 22 fields for as few as 1.
Q. Can I develop my own business programs?
A. For the most part, yes.
Q. What are the limitations? What programs can I produce with THE CREATOR® ?
A. Your own ingenuity and hardware limitations.
Q. Will future version of THE CREATOR® make my present copy obsolete?
A. The purchase price includes your original diskette and user instructions. Your program is registered in your name. For a period of one year from the date of purchase you will be entitled to receive FREE any improvements or modifications. The only expense to you will be a new diskette charge (if applicable), packaging and mailing.
TECHNICAL ASPECTS
The Reporter Package - makes reports your way.
Record access by a hashing algorithm guaranteeing fast record retrieval.
Duplicate keys permitted.
Record deletion automatically supported.
Record access and file maintenance is user transparent.
Minimal disc overhead since there is no special assembly language routine called. No "Basic" overhead.
Programs produced can be transported between 6800, 6502, 8080, Z80, 8085, 8086 and Z8000 based systems.
Can be used with Micro-Soft Basic and CP/M systems.
Complete file maintenance including up-date of any record in any field, delete and add new records even with duplicate key.

TITLE: DATA BASE
PUBLISHED BY: COMPUTER DISTRIBUTORS
MEMORY: 48K
HARDWARE: 1 DISK DRIVE

A general purpose data base, which you may use to generate any type of file. Can be used to monitor a client file, prospect file, etc. All control parameters are user-designated.

PRICE: Disk, $75.00

TITLE: DATA BASE
PUBLISHED BY: RAINBOW COMPUTING, INC.
MEMORY: 32K INTEGER

This card file program is perfect for application requiring cross referencing of entries, such as bibliographies, recipes, or phone lists where you need to either find a person's number or a number's person. You can run up to 9 lines of 40 columns each and you can search by any item in any line. Good for large disk files.

PRICE: DISK $20.00

TITLE: DATA BASE MANAGEMENT/FLEXIBLE FILES
PUBLISHED BY: AGENT COMPUTER SERVICES
MEMORY: 48K

Here is the Data Base Management system you've been waiting for! Define your own files - from name and address to client followup to inventory.
Includes the following functions:

1. BUILD
2. CHECK AND CHANGE
3. SORT (MULTIPLE FIELDS)
4. SEARCH (SIMPLE OR COMPLEX)
5. PRINT (CREATE LABELS, REPORTS, ETC.)
6. NAME-ADDRESS INTERFACE TO POWERFUL WORD PROCESSOR
7. DELETE (NO SPACE WASTED).

Uses Exclusive 'MENU' feature. Allows frequently used data to be entered with 2 keystrokes.
Great for home, business, club, or church.
This program is great for mailing lists. Allows sorting by zip code, city, state, or whatever combination of fields you want. Also allows Data Base to be searched by multiple fields. This is the one you've been waiting for. Church membership and club rosters are but two of its many uses. Mailing labels can be printed 1 or several across a page.

PRICE: DISK, 95.00

TITLE: DATABASE MANAGEMENT
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Disk-based system like those used on mainframes. Allows you to: create, edit, delete, display, print, sort, merge, etc. data bases of up to 10,000 records. 60 pages of documentation. 16-32K.

PRICE: $125.00

TITLE: DATA BASE MANAGER IFO PROGRAM
PUBLISHED BY: SOFTWARE TECHNOLOGY FOR COMPUTERS

The IFO (INFORMATION FILE ORGANIZER) can be used for many applications such as sales activity, check registers, balance sheets, client/patient records, laboratory data reduction, prescription information, grade records, mailing lists, A/R, job costing and much more. This can be accomplished easily and quickly without prior programming knowledge.
Up to 1000 records with a maximum of 20 headers (catagories) and 10 report formats (user defined) can be stored on a single diskette, information can be sorted on any header, both ascending and descending in alpha/numeric field. Mathematical functions can be performed on any 2 fields to manipulate the information. Information can be searched on any header using >, <, = >, = <, =, and first letter. Mailing list format provided. Fast assembly language sort, search and read routines. Many error protected devices provided. Put our application program together in minutes instead of hours. Program and instruction manual.

PRICE: $100.00.

Mailing List Program and instruction manual.

PRICE: $40.00

TITLE: DATA BASE MANAGEMENT SYSTEM
PUBLISHED BY: HIGH TECHNOLOGY, INC.

The DATA BASE MANAGEMENT SYSTEM (DBMS) is designed to perform a wide range of tasks involving the sorting, searching, and printing of a large amount of related information.

Most previously written business programs deal with a specific appliction of data base manipulation; for example, mailing list programs, inventory control programs, client or patient history programs, and so on. All these specialized programs are very similar in nature with respect to the way they manipulate data: they STORE the data under one or more field headings, they SORT the data according to one or more of the fields, they allow the user to SEARCH through the data, and they GENERATE FORMATTED REPORTS providing the user with useful information.

DBMS takes advantage of these similiarities by allowing the user to set up his own data base system layout. Thus this one program can perform all of the above tasks. DBMS also allows the user to design his own report formats. Merely think of the form of the print-out you want, then enter it into the system. (Reports may be up to 132 columns wide, limited only by your printer.) This greatly increases the utility of the system.

If your task requires the manipulation of a large amount of related information, the DATA BASE MANAGEMENT SYSTEM can probably handle it.

Here is the MENU of programs in DATA BASE MANAGEMENT SYSTEM: CREATE A NEW DATA BASE SYSTEM, EXAMINE THE PRESENT SYSTEM LAYOUT, MODIFY THE SYSTEM LAYOUT, ENTER NEW DATA INTO THE SYSTEM, MODIFY THE ENTERED DATA, SEARCH THE DATA BASE, GENERATE FORMATTED REPORT, PRINT MAILING LABELS, COMPACT/SORT THE DATA BASE, CATALOG A DISKETTE, DELETE A DATA BASE SYSTEM, INITIALIZE A DATA DISKETTE, UPDATE SYSTEM PARAMETERS.

48K.

SUG. RET. PRICE: $100.00

TITLE: DATA FACTORY
PUBLISHED BY: MICROLAB

For a long time, there has been a need for a truly versatile and powerful data base program for the Apple Computer. The Data Factory fills this void.

Introducing the Data Factory, a Disk Oriented Universal Data Management System, meaning that all data is stored on the diskette until needed. For sortings, searches etc. Only one column (Field) of data is loaded into memory. As a result, the only restrictions factor is the widest column in each record. A record containing twenty columns will use the same amount of memory as a record containing only one column.

The Data Factory allows you to manage large amounts of alph-numeric information such as INVENTORIES, MAILING LISTS, (FOR PRINTING MAILING LABELS), ACCOUNTS RECEIVABLE, ACCOUNTS PAYABLE, BUDGETS, RECIPES, APPOINTMENT CALENDARS, WORK LISTS, SHOPPING LISTS, LIBRARY FILES, ADDRESSES, GENERAL INFORMATION, ETC. FOR BUSINESS OR HOME. The Data Factory is constructed of nine (9) Modules. Only the module being used is loaded onto memory, rather than the entire program, thus saving most of memory for manipulations data rather than program storage.

The program allows you an almost unlimited amount of flexibility in manipulations and displaying data to a Monitor or Printer.

Every attempt has been made to make the program easy to operate for anyone

with little or no computer experience. The program is extensively error protected and uses plain English prompts for ease of operation.
Below is a partial list of the features found in The Data Factory. The use of this program is limited only by the imagination.
Written in Applesoft Basic-user modified
Use on systems with one or two Disk II drives
Can be used with or without a Printer
Uses the new DOS 3, 2, 1
Enter Data into any number of Columns (Fields) and Lines (Records) within your computers limits.
Enter ANY CHARACTER as data (Commas, quotation Marks, etc.)
Column lengths of 1 to 239 characters
Six (6) Sort variations for organizing data (Date & alpha/numeric)
Write sorted files to original or another diskette
Four (4) Search variations
Search from beginning or within a column of data
Search for One Kind of item
Search for MANY differnet items at one time
Search for items falling within certain Numerical or Date Values
Search using record numbers or data
Level Search-Search down 10 columns (Fields) deep
Make an index of data found in a column
Compare two columns of data
Perform all Routines on any column of data
List all or part of your Data File with or without record numbers
Three variations of Totaling (Adding) up a numeric column
Total, Average or Count a column
Complete File Editing functions
Change part of a line (Record) of Data
Delete a record of data
Delete a file
Construct a new file combining other files
Compute Disk Storage space remaining
Extensive user error protection
Complete Printer Routines
Flexible formatting of data sent to monitor or printer
Print out columns in any order, even more than once
Save print-out formats to disk
This is the tip of the iceberg, each Routine has further options
HARDWARE REQUIREMENTS
Applesoft in ROM or Language Card
Memory: 48K
One or two Disk II Drives
With or without printer

TITLE: DATACOPE TEXT FILE COPY
PUBLISHED BY: DATACOPE

ARE THOSE IMPORTANT FILES GROWING OUT OF CONTROL? TEXT FILE COPY CAN HANDLE IT! Put an end to your file backup worries and speed up processing at the same time. Simply utilize Datacope's Text File Copy in conjunction with existing or new programs, and prepare for the added speed and

versatility that will be yours. You will be able to manipulate files as never before. Copying, repair, merging, and splitting of files may be performed at will, or under program control. Read on for exciting answers to your backup needs.

WHAT IS THE DATACOPE TEXT FILE COPY?

It is a FAST machine-language program for the Apple II series of computers that will copy one or more blocks of records from one or more disk files to a single output file at binary read and write speeds. Datacope Text File Copy uses one or more disk drives, minimizes diskette switching, and automatically repairs unreadable sectors during the copy operations.

WHO USES THE DATACOPE TEXT FILE COPY?

You will want to, if you have text files which must be moved from diskette for backup, repair, merging, splitting, or convenience. Users include schools, libraries, offices, magazines, laboratories. programmers, churches, hobbyists, and many others.

WHEN IS THE DATACOPE TEXT FILE COPY USED?

Whenever you must move a text file from one diskette to another, especially when the file is unreadable due to I/O errors. The Datacope TFC can be used to copy a file or append from two to fifteen files. Up to fifteen blocks of records may be extracted from one or more files and copied to a new file or appended to (or inserted in) an existing file. The repair feature allows files which are uncopyable due to I/O errors to be copied with a minimum of data loss.

WHAT WILL IT DO FOR ME?

Your text files can be copied cleanly by the Datacope TFC enabling you to spend less time dealing with imperfect back-up copies of your important files. When a calamity happens — like a diskette getting scratched — the Datacope TFC will many times save an otherwise unreadable file. This can save you hours when compared to the alternatives: updating a previous backup file, or worse, starting a new file from scratch. And, the one copy program will work for many different copying tasks.

WHAT ARE THE EQUIPMENT REQUIREMENTS?

The Apple II or Apple II Plus with 32K or 48K RAM, or Apple Language System with at least one Disk II drive. More than one Disk II drive is permissible and 8" drives may be used with the Sorrento Valley Associates controller card. A version is available for the Corvus hard disk drive upon special order.

CAN IT BE MODIFIED INTO A TURNKEY SYSTEM?

Yes. The Datacope TFC is driven by an Applesoft program which can be modified for specific purposes. This Applesoft program passes the copy instructions to a machine-language program that uses all the available memory below DOS to copy the file. Upon completion of the copy it can execute a DOS command of your choosing and tie back into your program.

CAN THE DATACOPE TFC BE USED AS A SUBROUTINE?

It cannot be used as a subroutine, it must be employed as though it were a stand-alone Applesoft program. The Applesoft driver program may be modified to integrate the copy program into a turnkey system.

HOW MUCH MEMORY DOES IT REQUIRE?

The machine-language copy program uses all of the memory below DOS. Your Apple may have either 32K or 48K RAM: however, large files will copy much more quickly with a 48K machine if there is only one disk drive available.

WHAT FILE FORMATS WILL THE DATACOPE TFC COPY?

Any file format may be copied, including program files. However, the append, split, and repair features require that the files must be randomly accessible (i.e. opened to a fixed record length), and of the text type.

DO FILE FORMATS HAVE TO BE REDEFINED WITH EVERY COPY OPERATION?

No. The user has the option to save copy parameters to disk for later use with the same file format.

WHAT DOES THE PACKAGE INCLUDE?
All of Datacope's software is recorded on high quality 5¼" diskettes. Included is the diskette and a full-size comprehensive manual. The diskette has the Datacope Text File Copy program and the Datacope Disk Utility 1, a program that, in addition to other functions, saves space on a data disk by removing DOS (9,984 bytes) and by reducing the disk map (up to 2,816 bytes).
IS THERE A WARRANTY?
Yes. The Datacope Text File Copy is covered by a 90 day limited warranty. A copy of the warranty may be obtained by writing Datacope.
IS IT ON A PROTECTED DISKETTE?
Yes. All Datacope software is copyrighted and recorded on copy-protected diskettes. No attempt to copy should be made.
WHAT DO I DO ABOUT BACKUP?
You may purchse one backup unit when you return the serial numbered software registration card with proof of purchase. Datacope also offers quick replacement on warranty service.
PRICE: $49.95

TITLE: DATA-FLEX DATA MANAGEMENT-WORD PROCESSING-FINANCE-REPORT GENERATION-GRAPHIC DISPLAY
PUBLISHED BY: DARREL APPLESOFT

data-flex: Was formed with the goal of designing and "integrated" package of micro-computer programs which would enable business concerns and human service providers to utilize the new generation of micro-computers to handle their increasing needs for practical, low cost, information processing.

equipment: The Program Evaluation Package was engineered to run on the Apple II micro-computer with 32K of memory, two disk drives, and an attached printer. zone disk drive is utilized for the program package and the second for information storage. Information is retained on low cost "floppy disks" which are inserted and removed from the disk drive, each holding II8,000 characters of information. Printed output is available in "dot matrix" and "daisy wheel" printing formats depending on the printer employed. Remote operation can be achieved through the use of a telephone modem and terminal.

system: The Program Evaluation Package has been designed as a series of integrated modular programs covering information management, word processing, finance, report generation and graphic display. This modular approach was adopted to allow you, the consumer, to select the combination of programs most responsive to your specific needs.

Monitor - The monitor is the master program which loads and runs each of the sub-programs in the package.

instruction: This program constitutes a readily accessible instruction manual. It provides a description of each program along with detailed directions and operating commands.

initialize: This program assists you in designing information files. Setting up a file involves: (1) choosing a file name (2) selecting and labeling the items of information you want in your file, and (3) deciding on the number of characters of space you want to allocate for each item of information. Since information

is stored on separate "floppy disks" you may establish as many different information files as you wish.

codebook: This program allows you to save information storage space when setting up your information files by using abbreviated codes to stand for longer terms or categories. For example, the letters m and f may be used to stand for the words male and female. The codebook program thus provides a readily accessible reference guide to the codes you have established. As an added feature the "Manager" program checks each data entry against the "Codebook" to prevent accidental entry of incorrect or mistyped codes.

manager: This program handles data entry and retrieval. Using the commands for this program you may: (1) "Insert" a record number and the items of information you specified when you set up the file, (2) "Display" the information associated with any record number, (3) change the information you've previously entered, (4) "List" selected items of information "IF" certain conditions are met.

graph - This program allows you to summarize information from any data file in the form of a bar graph including code labels, line totals and percentages. To use the graph program you select the item of information you want to graph and the sorting conditions you wish to apply. For example, the command ("Graph") diagnosis "IF" age ' 15) would provide a graph of the frequency of coded diagnoses for children age fifteen. The correct label for each diagnosis is obtained from the "Codebook" program.

letter - This program allows you to: (1) write a letter (or report) on the screen, (2) edit the letter by adding and deleting lines, (3) specify "inserts" such as name and address, school major, appointment time, etc. when using the program to generate a series of letters to different people, and (4) store the letter for later use.

printer - This program provides the ability to: (1) print information appearing on the screen, (2) interface with a data file of information selected for insertion into a specified letter, and (3) print the number of desired copies of the letter on the attached printer.

underway - We are presently developing: a "Report Generator" which allows you to calculate subtotals and print summary reports and tables; this program can be used to generate inventory, billing, and accounting reports, (2) a "Graphic" Display" program which allows you to design a presentation or learning module by storing text, graphs, tables, etc., then replay the material according to either a timed sequence or viewer responses, (3) a "Map" program which graphically plots data within an area you outline on the display screen, and (4) an "Update" program which makes it possible to update information in one data file from a second.

TITLE: THE DATA HANDLER
PUBLISHED BY: BUSINESS COMPUTER SERVICES CO.

A Data Base system for APPLE, PET, and TRS-80 computer systems. The software package is a menu-based system with file handling, record handling, and program control operation selections. Special features include Mass Updating and Sorting by fields. The code is modularly designed for easy user customization.
PRICE: $25.00

TITLE: DATA MANAGER: A Data Base Management System and Mailing List.
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Lutus) Do what the big machines do with your Apple II! This all-machine language program stores up to 96,000 alphanumeric characters on just one floppy disk. Powerful cursor-based editor facilitates easy information alteration in the data base. Program permits the user to sort on any key and subfiles on any search. Retrieve data in any combination of categories from up to 32,000 characters within one-half second. Choose between screen display or serial printout (via the game paddle connector). Ideal for mailing lists, data banks, index files, or any other facts, files, or statistics that are begging to be organized.
PRICE: $49.95, #04909, Apple II Disk Version

TITLE: DATA MANAGEMENT
PUBLISHED BY: CHARLES MANN AND ASSOCIATES
MEMORY: 16K

This program has universal application as it allows input, editing storage, and retrieval of any information from recipies to technical summaries or accountingdata. The user simply inputs data or information in his format and it can be revised, stored, retrieved, or printed as needed. The program automatically creates its own "pages" and "books" for easy retrieval of data. The user may add printer interface statements to fit his hardware and expansion is available for large systems. The system includes a key number security to prevent unauthorized use of data files.
PRICE: TAPE, 24.95
DISK, 34.95

TITLE: DATA WRANGLER
PUBLISHED BY: THE COMPUTER ROOM

Data Wrangler is a comprehensive file handling program for the Apple II computer. Its unique design puts a whole new level of information management skills at your fingertips, whether you're a novice user or an experienced professional. Information enters the system from any input device recognized by your hardware configuration — keypboard, disk, cassette, remote computer via telecommunications, you name it.
Once in, the data occupies a workspace as large as all of free memory in your system. It is in this workspace, at machine-language speed, that your information can be listed, edited, transformed, replaced, manipulated, searched, sorted, formatted, or otherwise changed to your precise requirements.
Most major functions are accomplished with a single key. At any time, all the information in a file can be printed to an external printer, saved to the disk storage device, sent to another computer via telecommunications.
You are in total control at every step. The program is command driven, rather than menu driven, giving you much more speed and flexibility in real time operation once you master the terms. A hefty documentation package takes you step by step, clearly and simply, through the entire resources and capabilities of the package.
What's more, the program — while copyrighted — is completely copyable. It is anticipated that an active and imaginative user group will emerge, in which the members will share new applications and program notes with each other, for increased satisfaction and value.
What you can do, for instance ...
1) Activate your system with the ANSW command before you leave home. Call it up from a remote location and operate it as if you were there.
2) Call a remote time-sharing system such as the Dow Jones News and Quote Service. Get the information you want and save it to disk. Edit, sort, search, and

get the particular nuggets you want, off line.
3) Choose a character of your choice as a file separator. Have it indicate a carriage return, a tab move, a column formatting device. Use it as a sort key.
4) Make new files that other programs can use, in binary or text.
5) Create a file to include both visible and suppressed data. Have the printer print part of it, keep the rest of it in storage but not printed out.
6) Use Data Wrangler as a text editor, with full search and replace features.
7) Write a program in any language and save it as a binary or text file. Upload it to a timesharing service and debug it on remote. Download the corrected program and save it for use later.
8) Read in a binary or text file from disk, perform editing functions, save it back to disk, revise as you like.
9) Save graphics or any other image from the hires screen as a binary file. Use the graphics table for input. Make a sequence of images part of a CAI program, as a slide show.
10) Simulate program operation for demos by putting up menus, followed by hires charts or graphs.
11) You name it.
PRICE: $75

TITLE: DB MASTER
PUBLISHED BY: STONEWARE MICROCOMPUTER PRODUCTS

DB MASTER is the new name to be reckoned with! Practically every business uses lists in one form or another ... client lists with accounts receivable ... lists of suppliers (including their locations (terms)... lists of materials, specifications,. inventories, Government forms and filing dates, reserach & reference data, mailing lists ... and all those special lists unique to your business.
At last, you can apply the power of an inexpensive desktop computer to data management problems by combining DB MASTER and the Apple II computer!
DB MASTER is easy-to-use, even with no programming experience. You can build your own screen "forms", just like the ones you use on paper, including automatic formatting for easy entry of dollar amounts, phone numbers, dates and social security numbers. Once entered, your records can be retrieved and displayed on your screen—or combined to print the report you need.
An exclusive feature of DB MASTER is Dynamic Prompting(TM), which puts operating instructions on your screen ... whenever you need them!
You'll like our complete, professionally-prepared instruction manual ... and you'll love the fact that you'll rarely need to use it!
DB MASTER is versatile. It handles multi-diskette files with thousands of records — up to 1020 characters (four times the record size of other data base managers) per record — with all the search methods you need.
In fact, DB MASTER can retrieve any record from a disk in less than three seconds! And it includes the most powerful report generator you can buy for the Apple II.
If you need big computer features at a small computer price, consider what DB MASTER offers:
Machine language ISAM filing system with primary *and* secondary keys.
Password file protection.
Up to 9 screen "pages" per record.
Automatic data "packing" for increased disk capacity.
Edit mode includes calculator functions.
Wild card and partial string searches.
Report generator — including computed fields, subtotal & page breaks, number formatting, multiple lines per record, code (table look-up) fields, printer & screen reports and summary only reports.
A custom Disk Operating System — you won't believe how fast it is! (DOS 3.3 disk controller required).

DB MASTER, the name to be reckoned with in Apple data base managers. Now ... and for a long time to come.
PRICE: $189

TITLE: DESKTOP/PLAN -
PUBLISHED BY: PERSONAL SOFTWARE, INC.
MEMORY: 32K
DESKTOP/PLAN is a software system which turns the Apple II into a "problem solving tool" aimed at a business problem of most middle and upper level managers and many top executives —
—the development and analysis of business plans such as budgets, cost and price analysis, sales forecasts, cash flow planning, capital budgeting, profit and loss projections, and a myriad of similar types of analysis —
These analysis are being done now. Many are actually relatively simple and straight forward. But they are usually very time consuming and tedious to perform.
Hours are spent with pencil, paper, eraser, and calculator. Secretaries type, and re-type, reports.
And, the boss asks, after all the work,
"What if ....?"
The cycle is repeated — again, again, and again.
DESKTOP/PLAN solves this problem by allowing business persons to develop customized business planning and analysis systems. Little or no computer knowledge or training is required.
After a customized system has been developed the analysis can be easily and quickly executed over, and over, analyzing many alternatives. By merely changing one or two data values, such as sales growth rate, selling price, or cost, DESKTOP/PLAN can quickly determine the likely effect of such a change on the enterprise.
DESKTOP/PLAN provides the following functional capability to a user of the system:
With no computer programming knowledge or capability, a user describes to DESKTOP/PLAN, by interactively selecting functions desired from "menus" and answering questions displayed on the video device:
The format and descriptive contents of reports of a desired analysis.
The values of assumptions and initial quantities to be analyzed.
The calculating to be performed on the data to produce the desired analysis.
After entry by the user, DESKTOP/PLAN stores the data, calculations specified, and report descriptions in files recorded on diskettes.
Collectively the data, specified calculations, and report descriptions are known as a "model."
After entry of the model, the user can execute the specified calculations, print the reports, and display either the initial data or computed results on the video display.
DESKTOP/PLAN allows the user to change or modify the information in any of the files comprising the model and either replace the original files with the newly modified information or create a new file with the modified information. The model may be re-executed as many times as desired, testing different assumptions or initial planning values. "What if....)" questions may be easily answered.
After execution of calculations, the user can store the results of the calculations in a file on disk.
The user can display data on the video display, either before or after calculations have been executed.
Files of data of computed values may be consolidated with like files into "summary" models. Data from unlike may be "passed forward" to new files. For instance, identical sub-models of a chain of stores may be executed. After all stores have been modeled, the results can be summarized into a total of the en-

tire enterprise.
Or, a large manufacturing organization could have sub-models of manufacturing, engineering, marketing, and administration. After all the sub-models have been executed, totals can be "passed forward" to a summary model of the entire organization.
DESKTOP/PLAN - REPORTS
DESKTOP/PLAN prints reports from specifications describing the desired report and values immediately after execution of computations or data files maintained by the system.
Report specifications are entered by the user responding to questions from DESKTOP/PLAN and are stored in files recorded on diskette. A Report Description file contains the following information:
a. The maximum number of lines and columns for which a report may be printed.
b. Up to three lines of report heading/title information.
c. Up to two lines of column headings for each column specified.
d. Up to 30 characters of alphabetic description of the data in each line.
e. Codes to cause the printing of:
1. "Underscores" of the columns of data
2. "Double underscores" of the columns of data
3. Sub-headings
4. Blank lines
5. The start of a new page with appropriate page headings
Numeric, data, printed under the column headings, may be printed with zero, one, or two digits to the right of the decimal point.
In addition to the specifications contained in the Report Description file, additional flexibility in report formats is provided by responses to questions interactively posed immediately prior to reports being printed. These are:
a. An option to print the line numbers of each line on the report.
b. A selection of the line number from which to begin printing the report.
c. A selection of the line number through which to print the report.
d. A selection of the beginning and ending columns with which to print the report.
e. The number of columns of the model to print on each sheet.
f. A unique "run description" of up to 40 characters, to be printed on each page of the report.
After a report is printed the user is given the option of printing an additional copy of the report.
After all copies of the report are printed, a different report, using the same data, but with different line and column specifications may be requested and printed.
DESKTOP/PLAN - DATA
DESKTOP/PLAN uses data arranged in lines and columns, much as information is arranged on an accountant's 13 column analysis pad.
In most applications, a "line" of data refers to a different type of information, such as "Gross Sales," "Returns & Allowances," and "Net Sales."
A "column" of data normally contains the data for all of the "lines" for a specific time period.
DESKTOP/PLAN allows a user to specify up to 300 lines of data and up to 18 columns of data for each line in any model.
The system will NOT accommodate a model where these maximum number of lines and columns are specified. (The constraint is the availability of memory after all files have been read into memory. There is no way to precisely determine the size of model which may be executed without knowing the total number of alphabetic characters comprising all line and column descriptions. However, models of over 200 lines by 18 columns have been executed on a 48K system).
DESKTOP/PLAN generates and maintains two types of data files:

"Planning Values" contain data on which calculations have not yet been executed.
"Computed Values" contain data on which calculations HAVE been executed.
CALCULATIONS
Calculations are performed on planning values by DESKTOP/PLAN as a result of DESKTOP/PLAN interpreting and executing "calculations rules." These calculations rules are determined by the user, arranged in the sequence to be executed, and entered into the system.
Rules are entered by selecting from a set of pre-written "standard planning calculations rules." These rules perform the types of arithmetic commonly used by planners and include the following:
A. Rules to do arithmetic on lines of values
B. Rules to do arithmetic on columns of values
C. Rules to "generate" data
In addition to standard rules, DESKTOP/PLAN provides the capability of the user writing a small program in BASIC to execute custom computations not provided in the standard rules. This small program, written in BASIC, is easily incorporated into the EXECUTE function of DESKTOP/PLAN. Up to 20 "custom rules" may be incorporated.
The standard data generations rules provided are:
1. Extend or fill the values in a line
2. Interpolate between the values in a beginning column to the value in an ending column
3. Compute the growth rate of a line of values
4. From a line with a beginning value by the growth rate in a second line
5. Fill a column with a specified value
6. Convert all the values in a line to zero
7. Copy a line of values and shift the values right a specified number of columns
The standard "line arithmetic" rules provided are:
1. Add one line to another
2. Add a group of lines
3. Subtract one line from another
4. Multiply one line by another
5. Divide one line by another
6. Compute the percent the values in a line represent of a specified value
7. Accumulate a line of values so that each column of the resulting line contains the sum of the current and all preceeding columns
The standard "column arithmetic" rules provided are:
1. Add a group of columns
2. Add one column to another
3. Subtract one column from another
4. Multiply one column by another
5. Divide one column by another
6. Compute the percent the values in a column represent of a specified value
The rules are entered in DESKTOP/PLAN by selecting each desired rule from a menu of available rules in the sequence the rules are to be executed.
After the rule is selected, the user is prompted for line and column number on which the calculation is to be performed.
In addition to entering a new rules file, the user may:
a. Add rules to an existing file
b. Insert rules between previously entered rules
c. Delete a previously entered rule
d. Display and or modify an existing rule
e. Print the rules file
f. Save the rules file to disk
Programs Encompassing DESKTOP/PLAN
The following programs make up the DESKTOP/PLAN software system:

START
MENU
DESCRIPTION
VALUES
RULES
EXECUTE
PRINT
CONSOLIDATE
BACKUP
SETPARM

START

START is the program which is automatically loaded when the Apple II is started. START's function is to display a copyright notice and disclaimer of liability. After displaying the disclaimer, START loads and executes MENU.

MENU

Several functions are performed by MENU:

1. Displays a list of the functions which can be performed.
2. Prompts for a code for the function to be executed.
3. Read the files necessary to perform the selected function.
4. Automatically loads the program to execute the selected function.

MENU is automatically re-started upon the completion of execution of the selected function.

DESCRIPTION

DESCRIPTION prompts the user to simply describe the reports desired for the following information:

1. REPORT TITLE.

Up to three lines of a report title, which will be printed at the top of each page of a report.

2. MODEL SIZE

The user is prompted for the number of lines and columns to be used in this model.

The maximum number of lines is 300.

The maximum number of columns is 18.

3. COLUMN HEADINGS.

The user is prompted for two lines of headings to appear on the report above each column of values.

4. LINE DESCRIPTIONS.

The user enters the description which is to appear immediately to the left of the first column of values on the printed report. This description may contain up to 30 alphabetic characters.

The specifications for printing the decimal points are entered when entering line and column descriptions.

In addition to line descriptions, the user enters the codes to cause the printing of sub-headings, underscores, double underscores, blank lines, and heading up new pages.

When the user completes entering the report description information, DESKTOP/PLAN saves the description in a file on a diskette.

DESCRIPTION may also be used to make modifications such as corrections or additions to an already existing description file.

VALUES

VALUES provides three functions:

1. Enter and create a file of the Planning Values.
2. Modify a previously entered "Planning Values" file, optionally replace the original file, create a new, additional file, and optionally immediately execute calculations.
3. Display values from a Planning Values or Computed Values file.

RULES

RULES provides the capability of creating and maintaining a file of calculation

rules for the EXECUTE program to interpret and execute on planning values. The user can perform the following functions to enter and maintain a rules file:
1. Enter rules for a new rules file or add additional rules to an existing file.
2. Insert a rule into the current file.
3. Delete a rule from the current file.
4. Display/Modify a rule in the current file.
5. Print a listing of the rules in the current file.
6. Write the current file to diskette.

EXECUTE

EXECUTE causes the calculation rules to be executed on the data in a planning values file.

After the rules have been executed, the user can perform any or all of the following:
1. Display the computed values.
2. Save the computed values in a file.
3. Print reports.

PRINT

PRINT prints reports according to specifications from three sources.
1. The reports description file.
2. Specifications of the printer attachment to the Apple II, the page length, and page width from parameters stored in the Parameters file.
3. User responses to questions at the time of PRINT execution.

PRINT provides the user with the capability of printing as many copies of the report as desired.

Upon completion of printing, the user may specify additional reports with different lines and columns of data to be printed.

At the time the report is printed, the user can specify what lines of the report to print, which columns, the number of columns per printed page, whether to stop at the end of each page, and enter a unique "run identification."

CONSOLIDATE

CONSOLIDATE provides two capabilities:
1. The capability of summarizing identical sub-models into a concolidated model.
2. The capability of transferring individual lines of computed values from sub-models to a master model.

BACKUP

BACKUP is a "utility" to transfer Report Description. Planning Values, Computed Values, or Calculation Rules files from one diskette to another. This "backup" may be done using either a one or two disk drive system.

SETPARM

SETPARM is a utility which allows the user to enter six factors describing the specific Apple II system on which the system is being executed. These parameters are:
1. Type of printer attachment:
High Speed Serial Interface.
Parallel Interface.
Communications Interface - printer has automatic line feed.
Communications Interface - printer does not have automatic line feed.
2. "Slot" through which the printer is interfaced.
3. Printer "page width" in number of print positions.
4. Printed "page length" in number of printed lines.
5. Disk drive, 1 or 2, on which all DESKTOP/PLAN files are to be stored or retrieved from.
6. The date to be printed on all reports.

SYSTEM OPERATION

DESKTOP/PLAN is a "menu driven" system. That is, the user is presented with lists of functions that can be performed. The user is then "prompted" to enter a number corresponding to the function that is desired.

All program loading is done automatically by the system as a result of the functions selected by the user.
All other information entered by the user, such as file names, line and column descriptive information, and information about the "model" is checked for valid "range" if numeric information and valid lengths is alphabetic information.
If invalid data is entered by the user, the Apple "beeps" and flashes a message notifying him of the error.
When programs are bing loaded, files being read, or computations being performed, the Apple flashes a message advising the user what is happening. When the Apple has completed its work and requires input from the user, the Apple again "beeps" at the user.
PRICE: DISK, $99.50

TITLE: THE DIRECTORY MANAGER
PUBLISHED BY: SYNERGISTIC SOFTWARE

Run Integer, Applesoft, machine language, or exec. files with a single keystroke after booting.
Lock, unlock, load, save, or delete any file with 2 keystrokes.
Lock or unlock all files with a single command.
Un-delete deleted files.
Rearrange or sort any or all of the disk's catalog in seconds.
Rename files using normal, lower case, inverse, or flashing characters.
Transfer any binary or text files to another disk without knowing the file parameters.
Revector reset to enter monitor, BASIC, or rerun the menu program when reset is pressed.
Get the speed of machine language plus the ease of use of a menu.
PRICE: $30.00

TITLE: FILEMASTER I
PUBLISHED BY: RAINBOW COMPUTING, INC.
MEMORY: 32K, INTEGER BASIC
HARDWARE: DISK DRIVE

FILEMASTER I is a gneral purpose information retrieval system that allows you to use a powerful data base of your own design. The system uses a linked-list structure for fast, reliable searching on any size file.
The two program included are:
FORMAT - An easy, step-by-step guide for designing the data base that is most right for you.
Record size is up to 15 fields with a 100 character maximum each. The total number of characters for each record can be up to 500 characters.
Field Types:
(1) Subfield - character positions chosen by you are searchable.
(2) Word - any grouping of letters and numbers not contain a blank is searchable in any position in the field.
(3) Non-searchable.
You lay out the record display by allowing fields to be printed on the same line as , or below, the previous one, and any field may be printing optional.
RETRIEVAL
Records may be retrieved in any AND, OR, NOR, and NAND combination of fields.
Deleted records may be retrieved.
Retrieved records may be displayed on the screen only or sent to a printer.
Information is provided for sorting FILEMASTER files using the Datascope

Single Disk Sort (available for an additional $49.95).
PRICE: DISK, 49.94

TITLE: FILEMASTER II
PUBLISHED BY: RAINBOW COMPUTING, INC.
MEMORY: 48K, APPLESOFT ROM
HARDWARE: DISK DRIVE

FILEMASTER II is a general purpose information retrieval system that allows you to use a powerful data base of your own design. The system uses a linked-list structure for fast, reliable searching of any size file.
The four programs included are:
FILE DESIGNER - an easy, step-by-step guide for designing records that are the most right for your needs.
Record size is up to 15 fields with up to 255 characters each.
Field types:
(1) Standard - you sepcify which character positions in the field will be searchable.
(2) List - Anything delimited by a blank space on both sides anywhere in the field is searchable.
(3) Non-searchable fields.
You may lay out the record display by allowing fields to be printed on the same line as, or below, the previous one, and any field may be printing optional.
RECORD RETRIEVAL
Records may be retrieved in any AND, OR, NOR, and NAND combination of the standard and list fields.
Deleted records may be retrieved is you so choose.
Retrieved records can be displayed on the screen alone, sent to a printer, transferred to a file on a second disk drive, or tallied instead of displayed. The contents of the numeric fields of retrieved records may be totaled.
SORT INFORMATION - provides information for use with the Datacope Single Disk Sort (available for an additional $49.95).
FILE CONVERTER - for converting Filemaster I files into the Filemaster II format.
ADDITIONAL FEATURES - advanced math routines and disk-to-disk transfer.
PRICE: DISK, 99.50

TITLE: FILING SYSTEM CROSS REFERENCE FILE
PUBLISHED BY: DARELS APPLESOFT

The program enter, changes, deletes, searches and reports on the following fields;
*File - five alphanumeric characters represents a unique number to identify a filing position or location.
*Date - six alphanumeric characters
*Author - fifteen alphanumeric characters
*Subject - fifteen alphanumeric characters
*Recipient - fifteen alphanumeric characters
*Extra - five alphanumeric characters for use as you see fit.
PRICE: 30.00

TITLE: INFORMATION MASTER
PUBLISHED BY: HIGH TECHNOLOGY, INC.

HIGH TECHNOLOGY, INC. is proud to present INFORMATION MASTER, the most powerful and flexible software package available for the APPLE II computer. With INFORMATION MASTER and your Apple you can solve your record-keeping problems — AND WITH REMARKABLE EASE! First you simply specify what kinds of records you want the INFORMATION MASTER to store for you. Next you type in the information you wish to store. Then you let the INFORMATION MASTER do all the hard stuff for you:

ORGANIZING, SORTING, SEARCHING, SELECTING, ALPHABETIZING, SCHEDULING, INDEXING, CALCULATING, MULTIPLICATION, DIVISION, ADDITION, SUBTRACTION, EXPONENTIATION, SUMMATION, REPORTING, PAGING, LABELING, CATALOGING, SUMMARIZING, TOTALING, SUBTOTALING.

ADAPTABLE: You can organize your mailing lists, your customer lists, your inventories, your expense reports, student information files, client information files, accounts receivable and payable records ... INFORMATION MASTER can print your mailing labels, your product catalogs, your budget analysis, physical inventory checklist .. THE LIST OF APPLICAITONS NEVER ENDS!!!

EASY-TO-USE: Records can be added very easily and records you have already stored can be scanned, modified, and/or deleted very quickly and easily. And, as you do so, the records are automatically kept in sorted order for you — sorted (and sub-sorted) in whatever order(s) you choose. You can keep your records sorted in up to 5 different orders at once. It is also completely menu-driven and contains lots of error-trapping.

EASY-TO-LEARN: The user's manual is full of examples and illustrations. It even tutors you through a step-by-step trial run through all the program operations, so that even a novice can learn to use the system in a very short amount of time.

48K.

SUG. RET. PRICE $150.00

TITLE: INFOTREE
PUBLISHED BY: SIRO-TECH SOFTWARE PRODUCTS

A Tree-Structured Information System for the APPLE II Computer. Written in PASCAL.

INFOTREE is an interactive information storage and retrieval program written in UCSD PASCAL for use on the APPLE II. It allows the user to easily store and recall information, and organize it in any manner desired.

All data stored by INFOTREE is referenced by a "key", a string of up to 18 characters. Associated with any key can be from 0 to 18 lines of text. In addition, any key can "own" a list of sub-keys, allowing the user to separate his data into different logical groups. This separation can be taken to any level desired as any sub-key can own its own list of sub-keys.

The use of binary trees as a data structure allows extremely fast access to any item stored, while preserving the quick update time needed in an interactive system. This is not true, for example, in a system using linked lists or a sorted list. Coupled with its speed, INFOTREE is capable of storing 4,380 records on a single diskette, making the storage of fairly large databases possible.

As INFOTREE is an interactive system, we have made every effort to reduce the amount of operator typing needed to run the system. The user merely has to press the first letter of the command desired. INFOTREE fills in the rest and then asks for the key(s) it needs to execute the command. Pressing recalls the keys used in the last command one at a time. INFOTREE also automatically formats the keys as they are typed in, into a neat indented format.

The list of INFOTREE commands include ADD, CHANGE, DELETE, RECOVER, LIST SUBKEYS OF WHAT IS, PRINT SUBKEYS, MAILING LABELS FOR SUBKEYS OF, XREF LISTING OF SUBKEYS OR FILE KEY PRINTOUT, INFO,

HELP, and QUIT. A secondary Utilities program allows the user to prepare diskettes for use by INFOTREE, make back-ups, and "compress' the file, (to increase storage efficiency and speed on a crowded diskette).
Typical INFOTREE applications include personal information, mailing lists, phone number directories, appointments scheduling, memos — basically anything that can be typed into the computer can be stored, the only limitation being the users imagination.
PRICE: $69.95

TITLE: ISAM-DS
PUBLISHED BY: DECISIONS SYSTEMS

ISAM-DS is an integrated set of routines for the creation and manipulation of indexed files. ISAM-DS provides capabilities comparable to those on large mainframes. You can rapidly retrieve records by key value or partial key value (retrieves any record in a 200 record file, 60 char/record, in less than 3 seconds compared to a maximum of 38 seconds for a DOS sequential file). Files never have to be reorganized. Duplicate key values may be used. Records may also be retrieved in sequence. ISAM-DS routines are easily integrated into Applesoft programs — they use less than 3K RAM plus an index table. Requires: Disk, Applesoft.
PRICE: $50.00

TITLE: MAG FILES FOR THE DISK II
PUBLISHED BY: SOUTHEASTERN SOFTWARE

The need to keep track of the many articles, programs, new products, hardware advertisements, software advertisements, etc. in magazines is great.
Here is the answer. A magazine article filing program done in 6 modules to keep memory requirements low. A 16K system with the Applesoft II firmware card can run these programs.
MAG FILE CREATE - The first module creates a master file and a subfile by subject name and code number. There are enough characters allowed on the subject line for remarks or a sub-subject.
MAG FILE SEARCH - This module searches the master or the subfile by users choice of code number of subject. Subjects are searched for and displayed on the basis of their left four characters. For example the subject entitled: SORTING, SORTING PROGRAM, SORTS BY LAST NAME or SORTS (NUMBERS) will all be displayed with the data necessary to find the article.
MAG FILE DUMP - This module dumps all data to the screen with the corresponding record number 18 lines at a time. This allows user to see if data is present and correct.
MAG FILE CORRECT - In addition to the correction routine in the CREATE module another correction module is provided for later updating of a record or deletion of a record or placing different data in a record.
MAG FILE TRANSFER - Allows the user with one drive to create a backup copy of the programs plus the data files. This module loads the data into memory and dumps them to another diskette.
MAG FILES is done in Applesoft II using easy to use GET statements so that RETURN is not used on non-essential Input.
Plus all the excellent screen formatting, error trapping and user orientation you have come to expect of Southeastern Software.
16K.
PRICE: $18.00

TITLE: MAILING LIST DATABASE
PUBLISHED BY: SYNERGISTIC SOFTWARE

This new, user oriented mailing list program introduces professional quality and speed to the processing of name and address files. The self prompting features of Mailing List Database aid the user in creating and maintaining address files. Labels or printed lists can be readily produced at any time.

SINGLE KEYSTROKE COMMANDS - Any record can be displayed, edited, deleted or printed with just a few keystrokes. Updates and additions have never been faster or easier. The program uses fast binary rather than the slower text files.

CONVENIENT DATA ENTRY - All required inputs are prompted by the program. Recurring information and default names and numbers can be entered with a single keystroke.

MACHINE LANGUAGE SEARCHES - Any record in a given file can be found in less than one second by specifying part or all of 1 or 2 fields. All files on one or two disks can be searched with a single command.

MACHINE LANGUAGE SORTS - All records can be sorted by any field or combination of any 2 or 3 fields. Sorting 200 records, comparing 50 characters takes less than a minute. After sorting, files can be saved, printed, or displayed. A separate sort/merge utility is provided for sorting an entire disk of records.

MULTIPLE RECORD FORMATS - Three separate formatting options are available to meet different user requirements. These format options can accommodate 9 digit zip codes, foreign mailing requirements, multiple names, company names, 2 line street addresses, etc.

LARGE CAPACITY - Up to 1700 records on 2 disks can be accessed in seconds. A single print command will print all records on both disks or only those matching 1 or 2 search keys.

FLEXIBLE APPLICATION - The program can be adapted to numerous commercial and personal uses. Current suppliers, customers, clients, patients, members, even Christmas card lists can be kept on individual, updated files at all times.

Mailing List Database is supplied on disk and comes with a program for automatically converting existing text mailing list files. It requires 48K Apple II with Applesoft on ROM (or language card).

PRICE: $40.00

TITLE: MICRO INFORMATION SYSTEM
PUBLISHED BY: MUSE SOFTWARE
MEMORY: 48K

Handles accounts payable, inventories, appointment calendars, cost estimating, real estate listings, sales solicitations, manpower accounting, selective mailings and label printing, dietary information, phone directories and much more! Easily change the format to suit your specific data needs. M.I.S. uses a sophisticated multi-level data base structure for quick access to desired information, plus an automatic update fundtion for modifying records which pass your selection criteria. The Micro Information System also features a single disk sort (numeric/alphanumeric) on any field in with ascending or descending sequence. Easy to use M.I.S. includes an extensive documentation manual.

PRICE: DISK, 99.95

TITLE: MODIFIABLE DATABASE
PUBLISHED BY: SS
MEMORY: 48K OF RAM AND APPLESOFT

The Modifiable Database is a rapid response, general purpose data management system that can be automatically customized to the user's particular data storage, access, and manipulation requirements. The programs will create, under the user's direction, any number of new special purpose data management programs. One can make his own inventory control, accounts receivable, sales analysis, bibliography, memo programs, etc. The variety of applications is limited only by the user's needs and imagination. Features include:

EASILY CUSTOMIZED—The self prompting set-up program automatically modifies the basic program at the user's direction. The user specifies the number of fields, field lengths, headers, and a new program title. The customized application program is then created and saved to a new disk.

CONVENIENT DATA ENTRY—All required inputs are prompted by the program. Recurring information and default values can be entered with a single keystroke.

FAST RECORD ACCESS—Single keystroke commands allow any of 230*on-line records to be displayed instantly for editing, printing, or deleting. Up to 2000* records on 2 disks can be searched and/or printed with a single command. Data access and manipulation have never been faster or easier.

MACHINE LANGUAGE SEARCHES AND SORTS—Any record can be found in less than one second by specifying all or part of any 1 or 2 fields. A file of 230* records can be sorted in less than 1 minute. Sorted files can be displayed, printed, or saved.

*All record counts assume 100 character record length. Variations are directly proportional to record length.

MODIFIER MODULE 1 adds accounting and numeric processing features to the customized application program.

Added features include:

1. Columnar output of selected fields. A "$" will be printed before monetary fields.
2. Horizontal and vertical totalling.
3. Numeric operations on data. In addition to the original editing characteristics, field contents may be modified by addition, subtraction, or multiplication by a constant.
4. Searches for numeric values between a specified minimum and maximum.

User applications include programs for accounting and bookkeeping, numeric processing, real estate and insurance applications, etc.

MODIFIER MODULE 2 provides for user specified output formatting. The original printout format is a simple list of field headers followed by field contents for each record. The additional format options provided by Module 2 are:

1. Columnar output with page numbers and headers at the top of each page. One record is printed on each line of output.
2. Variable output. The contents of any field can be printed at any horizontal or vertical position on a preprinted form. This format can be used to automatically fill in the blanks of preprinted contracts, tax returns, invoices, purchase orders, etc.

Both Modifier Modules can be used concurrently.

PRICE: MODIFIABLE DATABASE, $49.50
MODIFIER MODULE 1, $15.00
MODIFIER MODULE 2, $15.00

TITLE: MFI UTILITY DISKETTE
PUBLISHED BY: THE COMPUTER EMPORIUM

This diskette extends the capabilities of MFI, the data-base system described above. Included on this diskette are programs which allow you to recover accidentally deleted files, sort files that are too massive to load into memory, read diskette catalogs into a MFI file, perform user-defined statistical functions on MFI files, search and replace MFI files, and do formula calculations on numeric fields with a MFI file.
These utilities are a must for anyone who uses MFI.

PRICE: $29.95

TITLE: MULTIFIELD INFORMATION SYSTEM (MFI)
PUBLISHED BY: THE COMPUTER EMPORIUM

This data-base dystem is a must for any type of record keeping. Usability is the Key word when describing MFI. Entirely menu driven, this system includes user defined defaults, user defined restraints on fields, fast search and sort capabillities, easy editing features, and much more. Another special feature of this system is the ability to combine a data file with a letter or document to allow the user to create "personalized" letters!

PRICE: $79.95

TITLE: PFS: SOFTWARE AND PROGRAM
PUBLISHED BY: SOFTWARE PUBLISHING CORPORATION

Using the concept of designing a form on the screen, PFS lets you create a file of information on any subject you wish without programming. You can catalog your stereo record collection, 35mm slides, magazine articles, daily expenses, or your club's membership list. Using PFS at work you can make better decisions by creating files on inventory, customers, or orders and accessing them in seconds.
To use PFS you simply design a form on the screen by typing the names of the items you want to store information about. Once the form is created you tab from item to item and fill in the information. This can be a single piece of data or several pages of text. Up to 1000 forms can be stored on a diskette.

Looking up information is just as easy. PFS can search for a number, a single data item, or a word within a page of text. All forms that match are displayed on the screen. You can browse through each one and change, delete, expand, or print it. PFS even has a print formatter that lets you create mailing labels. PFS software is different. It is not a specialized application package or a complex programmer oriented data base manager. It is a personal filing system that lets you communicate with the computer using meaningful everyday concepts to rapidly create files on any subject matter you require. PFS requires a 48K, 16-sector disk based APPLE II system.

TITLE: SELECTOR-IV (TM)
PUBLISHED BY: MICRO•AP, INC.

Our SELECTOR-IV(TM) data base management system will let your microcomputer operate with the flexibility available (up to now) only on larger systems. You can create, maintain and report on files limited in size only by your CP/M compatible operating system or disk storage capacity.
The basis of the power of SELECTOR-IV(TM) is our unique method of cross-indexing the information in your files. You can immediately recall records by the contents of any piece of information required — from account numbers to ZIP codes to the date of your last audit. You can update records, individually or all at once. You can create new, uniquely, selected sub-files from existing ones (in the same or a different format), and perform computations in the process. You can define procedures to generate computed invoices, personalized letters, or gummed labels with the information coming from several files at once, and invoke them whenever needed. You can add new items to a record definition and change or delete them at will.
We've come a long way since we released the first information management system in microcomputers. We've listened to your suggestions and incorporated the best of them. We've built screen editing functions into the system which make operating the system as convenient as possible. We've had SELECTOR-IV's documentation produced by our experts emphasizing its use for the novice, the applications developer, as well as, the retailer. Our applications specialists can provide you with a "turnkey" SELECTOR-TV system customized for virtually any requirement.
With SELECTOR-IV and a good word processor program, chances are you won't need any other software.

TITLE: TRANSACTOR
PUBLISHED BY: SOFTAGON INCORPORATED

Let TRANSACTOR give you the CONTROL you need to apply the KNOWLEDGE you have.
TRANSACTOR is an Applesoft* transactions oriented data base manager which is ideally suited for small businesses, educational or personal use.
Its operation is very simple and it is heavily documented to give you details on total internal operations of the programs as well as overall operation.
VERSATILITY PLUS!! Full program listings allow you to customize TRANSACTOR to your individual needs.
TRANSACTOR places information at your fingertips and is easy to adapt to the application or filing system you want. A valuable, effective tool for OPTIMUM INFORMATION HANDLING!
All programs are fully listable and come complete with sub-routine summaries for program modification. 2,000,000 byte capacity. High speed search of multiple or single keys, or by range of keys. Extensive, instructional manual with examples, in a convenient 3-ring binder. Reports are generated in vertical or horizontal format for ease of data analysis. Multiple input templates within the same database. Indexed Sequential Files (ISAM). Insertion sort.
PRICE: $69.00 plus

TITLE: UNIVERSAL DATA BASE
PUBLISHED BY: DARREL APPLESOFT

This program allows you, the user, to define your database as you see fit. There are a few maximum limits that were put into the program due to memory size of the Apple II. You are allowed up to 15 alphanumeric fields of a maximum of 39 characters each and 4 numeric fields. The 4 numeric fields 1 and 2 are integers, numeric fields 3 and 4 are dollar fields. If dollar field 4 is used then it is automatically created by multiplying numeric field 2 by dollar field 3. The program allows you to give titles to each field used. These titles and lengths of each field you are using are saved on tape along with the database. The program will create database records of a length you specify. For example, if you use only two fields and you specified the length of field 1 as being 5 characters and field 2 as being 9 characters, then the database record has a total length of 14 characters. The number of records your database will hold is a function of how much memory the computer has, divided by the record length; e.g., if I have 10,000 bytes or memory available after the program is read in then the total number of records is equal to 10,000/14 or 714 records. The program completely maintains the database. There is no need for another program. It will add, change or delete any record. It will search generically on any of the 15 alphanumeric fields and print the selected items on the printer, if you have one. The term generic means to match only the beginning portion of a field. (e.g., if I want to select from field 1 all words that start with an A, it will pick up words like "Able", "Alice", etc.). The print routines allow you to specify how many lines per page. The report titles come from the titles that you specified when defining the database.
The uses of this program are utterly endless. The kids can use it to inventory their toy chest. Recipes can be stored on the database. Any cataloging system can be put on it; e.g. phonograph records and tapes, photography prints, drafting drawings, used book stores, filing system for job agencies, etc. Virtually any system that needs a search of many fields can utilize this program.

TITLE: VENDOR FILE
PUBLISHED BY: DARREL APPLESOFT

The program enters, changes, deletes, searches (generic) and reports on the following fields:
*VEND NO. - six alphanumeric characters used as a record key.
*NAME - Twenty alphanumeric characters.
*ADDRESS - Twenty-five alphanumeric characters for the street address
*CITY - Fifteen alphanumeric characters.
*STATE - Five alphanumeric characters.
*ZIP - Five alphanumeric characters used it identify him in a class.
*COM1 -
*COM2 -
*COM3 -
*COM4 -
four alphanumeric characters to further identify the vendor into sub-classes.
PRICE: 30.00

TITLE: WHATSIT
PUBLISHED BY: INFORMATION UNLIMITED SOFTWARE
MEMORY: 48K or 32K

WHATSIT is a simple-to-use, highly conversational data base/query program for micro computer users. WHATSIT allows you to store incredible amounts of information about your job, your hobbies or any other aspect of your life or business.

Comes with an illustrated manual that presumes absolutely **no** previous knowledge of computer programming or use. This astonishing program has quickly become a standard in the industry for small data base managers.

PRICE: Disk, $100.00, 32K; $125.00, 48K



TITLE: DATABEE™
PUBLISHED BY: OMNICO

ABSOLUTELY THE MOST VERSATILE DATA MANBAGER ON THE MARKET.
Unlimited Fields — Record length 250 characters.
Temporary Computed Fields.
(Perform any arithmetic computation on any field to create new fields.)
Search for [], =,], [, in any field for any number of characters.
Sort in every conceivable manner.
Multiple print formats user designed.
Will track 9,999 records.
Requires 48K, Single Drive.
PRICE: $210

TITLE: DATA MANAGER: A data Base Management System and Mailing List
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Lutus) Store information on a floppy disk, and retrieve it quickly and easily by specific names, or by category. 04909, Apple II Disk Version
PRICE: $49.95

TITLE: THE MICROCONDUCTOR™
PUBLISHED BY: MICROCOMPUTER TECHNOLOGY INCORPORATED

Compose any software program by simply answering the questions, YOU Describe the file layouts, YOU Specify the print formats, YOU Design the update functions. The CONDUCTOR DOES THE WORK!!!
The MICROCONDUCTOR™ directs your computer to compose, organize and summarize all information you need to solve your software and business problems. With The MICROCONDUCTOR™, your computer will be able to compose any record-keeping software you need. In the office, The MICROCONDUCTOR™ can help with anything from accounts receivable to property management. You'll find that The MICROCONDUCTOR™ is ideal for the shop too. Let it take care of your inventory records, sales analysis, price lists, and more.
The MICROCONDUCTOR™ is not just a file manager but a true Data Base Management System suitable for both the novice and professional users.
Some of the modules of this masterpiece are:
DATA FILE — One step file creation. Just set it, and forget it.
MAINT. — Manipulate your data files with ease; add, delete, modify, scan, relocate, and more.
SORT — Sort any number of fields, in any sequence, ascending or descending order.
UPDATE — Single or dual file report and update utility.
The MICROCONDUCTOR™ is power at your fingertips! Power to set up, maintain, sort, report, and update data files at whim. Just imagine: with the MICROCONDUCTOR™ you can establish a custom mailing list system in 30 minutes, accounts receivable in 2 hours, a complete business system in only a few working days. Never before has your computer been given such power!
DATA FILES — No limit on the number of records a file can have.
FIELDS — Any type (string, integer, single, double). Eight entry modes (including defaults, counting, and suppress).
REPORTS — Four ways to generate reports. Total numeric column(s). Print on any paper in any format (statements, labels, etc.).
SORT — Any field(s) in any combination (i.e. multiple-key sort). Any size file, numeric or ASCII. Ascending or descending.
MAINT. — Command anticipation. Record duplication. Direct access and sequential search.
UPDATING/MERGING — Add, subtract, multiply, divide fields. Combine results from previous calculations. Test for any condition and take action.
PRICE: $299, Apple

TITLE: ON-LINE DATABASE
PUBLISHED BY: BLUE LAKES SALES

An extremely fast and easy to use database system. Full screen editing during data entry or updating. Holds binary file pointers in memory to reduce disk access to a minimum. Allows user definition of searches and sub-sorts based on fields and sub-fields in the data records. Automatically prints full data screens, user defined reports, and mailing labels.
Memory: 48K.

PRICE: $100.00

TITLE: PASCAL DATABASE
PUBLISHED BY: ARIZONA COMPUTER SYSTEMS

Program offers unlimited applications for such diverse data as mailing lists, personal business accounting, inventory, job estimates, sales analysis, and property management. Clear screen instructions enable even the novice to operate the program. Features include on-line interaction, update, search and traverse files, sort on multiple fields, maintain records in several sorted orders; screen formatting — you design the layout of your files; immediate and automatic indexing of information at data entry; and user definable data description — you define file, record, and field names. Generates easy-to-read custom reports. 48K, language system, disk.



CompuCourse™ programs represent the best in training software brought to you by Educational Programming Systems.

CompuCourse™ programs provide the proper mix of educational methodology and computer technology because it's backed by the full resources of Education for Management, Inc. and International Data Group.

Education for Management has over a decade of experience in the publication of self-study courses. Annually, more than 60,000 businesspeople increase their effectiveness through self-development materials developed by EFM. International Data Group is a world leader in publishing for the computer industry with such publications as *Computerworld, Computer Business World,* and *Infoworld.* By drawing on these two resources EPS provides personal courseware which is educationally sound and technologically advanced.

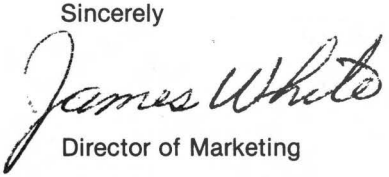
Whether you're using your desktop as a business tool or for home entertainment — or both — you could be missing a dramatic and important payback on your investment. That payback is knowledge and the skill to use it — the most inflation/recession proof assets you can possess.

Your microcomputer can help you obtain both knowledge and skill because, with good personal software and educationally sound courseware, your computer is a powerful teaching device. Educational Programming Systems Inc. provides this intellegent training system with its CompuCourse programs.

CompuCourse programs combine printed text material and software to transform the computer into a personal tutor and then allow application of the new skills with its problem solving software.

Even if you have no familiarity at all with a particular field, by the end of the CompuCourse program you'll have a firm grasp of its essential points and can be able to use your computer to implement a whole range of new, practical skills.

Sincerely



Director of Marketing

EDUCATION

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EDUCATIONAL SUGGESTIONS

This index is only a guide to software that will be of interest to a particular education level or subject area. Math programs are listed in the Math section of the book. However there are a few listed in this section.

Elementary schools can utilize the Apple in many areas of the curriculum. Allowing students to interact with the computer a few minutes a day will help strengthen a particular subject weakness as well as give excellerated students a chance to move at their own pace. The list is endless to the support that the Apple II/III computers will lend to your overall educational objectives. Also refer to Strategy Games and Games sections in this directory as some of those programs function very well in educational environments.

Teachers and administrators should refer to School Administrators section of this book for programs of particular interest to class and school management. Time Sharing section will be of great value for a school, library, resource center or home.

Listed are some very basic programs in 3 different grade levels. See M.E.C.C. -this book.

ELEMENTARY SUGGESTIONS: Alphabet, Analogies, Apple Grammar, Apple Pilot, Astro Word - Geography, Bagles, Basic Math, Clocks, Color Math, Comp-U-Read, Comp-U-Spell, Computer Poet, Dr. Daleys Best Edu Pak, Educational Series, Elementary Math, Favorite Guessing Game, Scramble, Sentences, Spelling, Spelling Builder, State Capitals, My ABC's, Story Builder, Story Teller, Tachestoscope, Talking Calculator, U.S. Map, Vocabulary Builder I, Word Fund, Word Skills, Educational Programs, Individual Study Center, Micro Computer Ed. Programs, Language Arts, Math Series, Planets, Patient Professor, Stories, Memory Builder, My ABC's, Preschool IQ Builder.

These programs include subject areas of reading, spelling, ability to follow instructions, language arts and cover grades 1-6. Also see M.E.C.C. section of the book.

JUNIOR HIGH: Analogy, Appilot - Edu Disk, Applepilot, Alcohol, Aristotles Apple, Astroapple, Circulation, Code Breaker, Comp-U-Read, Comp-U-Spell, Computer Programming Cross Words, Distance Game, Dr. Daleys Best Educational Series, Energy and Environment, Flight Simulator, Frustration, Reading Comprehension, Readings in Literature, Secret Writing, Sentence Completion, Sentences, Shell Games, Sirius, Speed Reading. Spelling Series, Sports Trivia, Super Map, Teachers Aid I and II, Verbal Skills Pak, Vitafacts, Vocabulary Builder 2 Advanced, Windfall, Word Skill Series, Basic Math Competency Skill Drills, Class Room Computer Package, Educational Programs Study Quiz Files, Individual Study Center, Ghostwriter, Fundamental Skills for General Chemistry, Mind Step 1 and 2, I.Q. Builder Series, George Earls, Human Female Cycles, Language Arts, Light Pen Quiz, Map Reading, Math Drill, Mathermind, Microtrivia, Mini Cross Word, Monty Plays Scrabble, Morse Code, Multiple Choice Files, Number Guess, Number Series, Perception. These are just a few suggestions. There are many other programs described in the Educational Section that will apply to your needs. Read through the entire section carefully to gain an idea of uses for many of these programs. Also see M.E.C.C. section of this book.

HIGH SCHOOL & COLLEGE: Basic Tutor I - VII, Astronomy I-II, Acid Base Chemistry, Atomic Structure, Biology Series, Chelsea Series, Chemistry With a Computer, Chemical Equilibrium, Fundamental Skills for Chemistry, Readings in Literature, Laboratory in Cognition and Perception, I.Q. Builder Series, Vocabulary Builder Series, Word Skills, Microtrivia, Population Genetics, Typing Tutor, Typing, Sex Role, Memory Skills. Also refer to Math Section, Engineering Section and M.E.C.C. section. Applications at this level are virtually unlimited.

TITLE: ADD WITH CARRY
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Here is a program to help you with harder addition. You are presented with a series of addition problems of increasing difficulty. You add one column at a time, filling in the column sum and then the carry amount. If you do well, the problems get harder, if you don't, they get a little easier.

TITLE: ALPHABET
PUBLISHED BY: STEKETEE EDUCATIONAL SOFTWARE

As the child types the letters, the APPLE II displays them in vivid color on the screen, and plays the alphabet song. Kids love it! Good for learning to type too. Ages 4 and up. Comes with two other educational games.
PRICE: $10.95 Tape, $15.95 Diskette

TITLE: ANALOGY
PUBLISHED BY: SLIWA ENTERPRISES

Over 1200 word relationships.
PRICE: $19.95

TITLE: ANALOGIES
PUBLISHED BY: MEDISIM

Develops a method of solving word analogy problems and gives you practice questions. Junior High and up. 6 programs plus guide. Requires 8K.
PRICE: 9.50

TITLE: APPILOT EDU — DISK
PUBLISHED BY: MUSE SOFTWARE

Low cost COMPUTER ASSISTED INSTRUCTION for home and school becomes a reality with the release of the APPILOT language. APPILOT is an Apple II version of the standard CAI language Pilot. Using lesson files created by the Appilot program editor, Appilot creates multi-media learning experiences using text, graphics and sound. The student can interact with Appilot in both numbers and words which Appilot recognizes as student input. Appilot is the end product of ten months of programming effort and has been extensively tested. It conforms to the proposed Common Pilot Standard but incorporates enhancements that fully use the capabilities of the Apple II computer. Included in these are color graphics commands, a musical mini-language, and disk commands for lessons segmentation which gives an effective lesson size up to 90K. Appilot also links to the Apple's integer Basic to allow full calculation capacities. For educational and other institutions who wish to author as well as use Appilot lessons the Appilot EDU-DISK is perfect. The user can develop lessons, store them on disk and run them with the Appilot interpreter. The Appilot EDU-DISK even comes with interactive instructional lessons written in Appilot, that instruct the user on all aspects of the Appilot CAI development system.
32K.
PRICE: $49.95

TITLE: APPLE GRAMMAR
PUBLISHED BY: EDUCATIONAL SOFTWARE PROFESSIONALS, LTD.

APPLE-GRAMMAR is a program that covers 7 parts of speech of the English language. It quizzes children and reinforces specific parts of grammar that need attention. The parent or teacher can easily enter the program and make desired modifications. At the end of each segment, that portion is corrected with an appropriate explanation and reinforcement. The results are then compiled and

graded and the drill is ready for continued use.
PRICE: $19.95

TITLE: APPLE-GRAMMAR
PUBLISHED BY: EDUCATIONAL SOFTWARE

Written by Tom Ankofski, is a program which utilizes the basic skills of grammar. Nouns, verbs, pronouns, adjectives, adverbs, prepositions and conjunctions are presented in sentance-quiz form to the student. The program allows the teacher to chose specific areas of grammar that need attention and alter the quiz easily. It, also, provides positive reinforcement to the child by correcting his work in color graphics and scoring at the end of the quiz. This program won AEDS and NCC (National Computer Convention) awards. Program requires 16K Applesoft.
DISK. 19.95

TITLE: APPLE PILOT
PUBLISHED BY: APPLE COMPUTER INC.

Apple PILOT is a powerful, easy to use system designed to support program development for Computer-Assisted-Instruction (CAI). If you're familiar with the PILOT language, you'll quickly become proficient in developing Apple PILOT courseware — and at a franction of the cost of most other systems.
Based on COMMON PILOT (as defined by George Gerhold and Larry Kheriaty of Western Washington University), Apple PILOT offers much more than simple language capabilities. Color graphics, sound effects, and a character set editor allow lessons to be presented in words, pictures and sounds.
Apple PILOT .. may be learned quickly by anyone familiar with the PILOT language, because it is menu-driven and provides HELP screens ... significantly heightens students' interest and retention through its graphics, animation and sound effects capabilities ... gives instructors access to large libraries of material, because programs written in PILOT 73 and COMMON PILOT may be run on the Apple system ... allows educators to share material in creating new and different lessons, because libraries of pictures, sounds, character sets, and PILOT routines can be saved on diskettes ... provides the capability of recording both student lessons and grades on the same diskette, because the author can programmatically create files for general purpose record keeping ... places no restrictions on lesson length, since a single lesson may span many files and/or diskettes ... helps evaluate student performance by timing individual student responses ... assists in foreign language instruction, because character sets in different languages can be developed easily ... allows educators to make hard-copy files of lesson text through a built-in print routine.
Apple PILOT operates in two modes — Author and Lesson. In Author Mode, the instructor/designer creates lessons and stores them on a lesson diskette. The student then uses that diskette to "take a lesson", that is, interact with the computer as specified by the teacher.
In Author mode, menus and HELP screens direct and assist in creating a lesson. The main menu provides the following options:
Initialize a Diskette — Automatically formats a diskette and copies from the Author diskette certain required system programs and files.
Create/Edit PILOT Lesson Text — PILOT is a high level language particularly suited to the needs of courseware developers. It is the heart of the system. Using simple commands, the author defines the flow and logic of a lesson and integrates any previously defined graphics, sound effects, and special

characters into that lesson. The lesson can also be tested by using the RUN option.
Create/Edit Graphics — The author can create high-resolution color graphics to include anywhere in the lesson(s). Simple keyboard commands draw lines, circles and rectangles; or the control paddles can be used to sketch free form designs. Text may be written anywhere on the graphic screen. These "pictures" are stored on diskette.
Create/Edit Sound Effects — Music/sounds can be dynamically created and played back using simple menus and keyboard commands. The sounds are stored on diskette for inclusion in any lesson.
Create/Edit Character Sets — User defined characters are simply "drawn" on a grid using keyboard commands or control paddles. These special characters can be associated with any Apple keyboard printing characters.
Copy a Lesson Diskette — allows the author to make multiple copies of a lesson diskette for wide distribution or concurrent use by students.
In Lesson Mode, the student merely inserts a lesson diskette into a disk drive and is presented with the material as specified by the author/teacher.
To use Apple PILOT, you will need the following system:
Apple II or Apple II Plus, each with 48K of memory;
One Apple Disk II drive with controller for Lesson Mode; or two Disk II drives, one with controller, for both Author and Lesson Modes. No more than two drives are supported.
DOS 3.3 or the Apple Language System, each with 16 sector state and boost PROMS;
Video monitor or television.
Optionally, if lessons are to be printed, a compatible printer and printer controller card are required. The Apple Computer System works with several printers and appropriate controller cards, including those specified below:
Apple Silentype Printer Card: Silentype Interface Card (suplied with printer)
Centronics Card: Centronics Printer Interface Card (Apple Product A2B0007)
Printronix Card: Parallel Interface Card (Apple Product A2B0002)
Qume Sprint 5, Diablo Hyterm, and NEC Spinwriter 5510R Card: High Speed Serial Interface Card (Apple Product A2B0005) with P8-02 PROM.
Language:
Written in Pascal; however the Apple Language System is not required to run Apple PILOT.
Diskettes:16 sector format.
Commands:
Apple PILOT includes all of the following standard COMMON PILOT commands:
A: Accept, AS: Accept Single, C: Compute, D: Dimension, E: End, FI: File Input, FO: File Output, F: Graphics, J: Jump, M: Match, PR: Problem, R: Remark, T: Type, TH: Type and Hang, U: Use, XI; Execute Indirect.
In addition to providing all of the COMMON PILOT commands and facilities, Apple features the following extensions:
AP: - Accepts point or graphics screen.
FIX:n,var$ - Opens diskette file [var$] for input and/or output with [n] records.
FOX:n,var$ - Creates new diskette file [var$] with [n] records.
G: C n - Set pen color to [n].
G:ES n - Erases the graphics screen color to [n].
G:T - Prints text at the graphic coursor position.
G:V r,t,b - Sets graphic viewport coordinates.
GX:name - Draws previously defined graphic image [name] onto the screen.
L:name
L:name, label - Links to PILOT lesson [name], optionally at the specified point [label].
PR:T nnn - Sets accept response time in seconds.

S:p,d - Generates a sound of pitch [p] for duration [d].
SX:name - Plays previously defined sound effect [name].
TX:name - Types output and accepts in-put using previously defined character set [name].
W:nnn - Waits [nnn] seconds.
X = BTN(n) - Returns push button status.
X = KEY(0) - Returns keyboard status.
X = PDL(n) - Returns control paddle position.
X = RND(0) - Returns a random number between zero and one.
X = TIM(0) - Reads accept response time.
With your Apple PILOT order, you will receive: Write-Protected copy of the Apple PILOT Author Diskette; Apple PILOT Lesson Diskette; Apple PILOT Reference Manual.

TITLE: ALCOHOL
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Are you a lush? Do you like to hide your Ripple in a Grape Nehi bottle? Alcohol allows you to experiment with the relationship between drinking, the alcohol level in your blood, and its effects on your behavior. Enter parameters such as body weight, time spent drinking, type of beverage and number of drinks. Sound and graphics — even a bubbling champagne glass! — make Alcohol fun as well as informative.

TITLE: AMERICAN AVECULTURAL ART & SCIENCE
PUBLISHED BY: KUNIHIRO TANAKA
MEMORY: 32K

Approved by State for research of birds by U.S. Government.
Non-profit research and educational organization only one in U.S.

TITLE: ARISTOTLE'S APPLE
PUBLISHED BY: STONEWARD MICROCOMPUTER PRODUCTS

A computerized tutor for any subject, at ANY level. 48K/Disk/Applesoft. 2 modes of instruction — tutor and test; 3 quiz types — fill in, multiple choice, and matching, including alternate answers for fill-in questions; stores quizzes on disk for fast, easy access; multi-level learning reinforcement, written by a specialist in Computer Aided Instruction (CAI); highly interactive, no programming knowledge necessary; good for students, home study and correspondence courses, government and ham radio exams, etc.
PRICE $34.95

TITLE: ASTROAPPLE
PUBLISHED BY: SOFTWARE FACTORY

ASTROAPPLE produces a NATAL HOROSCOPE for each subject who has entered his or her birthplace and birthdate. Included in the interpretations are paragraphs describing your Sun sign, Moon sign, Ascendent, and much more. A chart can be displayed showing the positions of the planets at the time of your

birth. ASTROAPPLE compares each pair of subjects who have entered their brithdate and produces astrological ratings for physical, emotional, and intellectual compatability. In addition, ASTROAPPLE produces a THIRTY DAY FORECAST for any month(s) you choose.
APPLESOFT/ASSEMBLY. 32K.

PRICE: TAPE $15.00
DISK $20.00

TITLE: ASTRO WORD SEARCH: GEOGRAPHY
PUBLISHED BY: PROGRAM DESIGN

Junior high to adult. Search for hidden geographical place names in a pattern of letters generated by the computer. Words can be hidden across, down, or diagonally as in the popular word-search puzzles. Hundreds of different puzzles can be formed by the puzzle in 3 programs. Computer scores you on how well you do.

PRICE: DISK or TAPE, 14.95

TITLE: ASTRO WORD SEARCH: FRENCH
PUBLISHED BY: PROGRAM DESIGN

High school to adult. As in Astro Word Search: Spanish, the computer genreates puzzles where the user looks for hidden vocabulary words. This time the words are French.

PRICE: DISK or TAPE, 14.95

TITLE: ASTRO WORD SEARCH: SPANISH
PUBLISHED BY: PROGRAM DESIGN

High school to adult. As in Astro Word Search: Geography, the computer generates hundreds of different puzzles, but this time the hidden wrds are common Spanish words. Helps improve Spanish vocabulary. Computer scores you. 3 programs.

PRICE: DISK or TAPE, 14.95

TITLE: AUTOMOTIVE DIAGNOSIS
PUBLISHED BY: POWER SOFT

A program that will assist the user in diagnosing most automobile problems. From generalized questions that the user responds to , the program will narrow down the problem into a few highly probable causes. Probalbe solutions for the problem indicated can be from a very minot repair, to those which are quite complex. The program does not describe the repair procedure.
Written for Apple II DOS the program uses the CHAIN command to load one of nine programs correlated with the nine catagories available to the user.

PRICE: TAPE, 14.95
DISK, 19.95

TITLE: BAGLES
PUBLISHED BY: COOKS

Bagles is a number-guessing game. Students learn to draw inferences from clues and develop problem-solving strategies.

PRICE: 7.95

TITLE: BASIC MATH
PUBLISHED BY: COMPUTER HOUSE DIV.

Plane Geometry, Spherical Geometry, Analysis, Matrix 1, Matrix 2 and Vector.

PRICE: $38.00

TITLE: BLISS
PUBLISHED BY: COMPUTER DISTRIBUTORS

A program for the handicapped person who cannot communicate in a normal manner. BLISS is a symbolic language developed over 30 years ago, and used by some 12,000 in the United States. The cost of this program has been covered by Blue Cross in two states. If you know of a hospital or a person who would like more information please contact COMPUTER DISTRIBUTORS. This program allows the user to designate a BLISS symbol with any positive response, thereby freeing him from the electro-mechanical boards formerly required Apple and Display (monitor) can be mounted on the wheelchair. This program has been successfully in use at West Seneca Development Center in New York.

PRICE: Disk, 100 Symbols, $ 500.00
200 Symbols, $1000.00
300 Symbols, $1500.00

TITLE: CHEMISTRY LAB SIMULATIONS #1
PUBLISHED BY: HIGH TECH

Developed by a chemistry professor, this set of programs is designed as an educator's lecture aid as well as a learning tool for individual study.
Using the Apple's powerful high-resolution graphics, the programs simulate introductory-level shemistry lab experiments including:
AN ACID-BASE TITRATION EXPERIMENT
DETERMINATION OF A WEAK ACID EQUILIBRIUM CONSTANT
involves two simulations:
A TITRATION EXPERIMENT
A pH-METER EXPERIMENT
DETERMINATION OF AVOGADRO'S NUMBER
involves two simulations:
A TITRATION EXPERIMENT
A MONOMOLECULAR FILM EXPERIMENT
FEATURES:
Easy to use and fun to use!

The user is given easy-to-follow instructions before and during each experiment.
Dynamic illustrations in high-res graphics.
The programs provide randomly generated initial values to insure that the experiments can be used over and over without arriving at the same results each time.
PRICE: 100.00

TITLE: CHEMISTRY LAB SIMULATIONS #2
PUBLISHED BY: HIGH TECH

CHEMISTRY LAB SIMULATIONS #2 is a powerful teaching tool for the college or high school professor of introductory chemistry. The programs are also useful for individual study by chemistry students. They utilize Apple's colorful low-res graphics and they written in machine language for fast response time. For example, one of the programs illustrates the IDEAL GAS LAW:
PV=nRT
During this illustration, the ideal gas is represented on the video screen as particles bouncing and colliding with one another in space. The student is allowed at any time to alter any of the four parameters which affect ideal gas behavior. (The four parameters are: Pressure, Volume, Temperature, and Number of moles of gas.) IMMEDIATELY after altering a parameter, the student will see the effect of the change on the other three parameters and on the behavior of the gas.
The other two programs in the package illustrates the ENTROPY of ideal gases.
FEATURES: Easy to use and fun to use!
Dynamic illustrations in colorful graphics.
Can be used as a lecture tool or for individual study.
PRICE: 100.00

TITLE: CIRCULATION
PUBLISHED BY: MICRO POWER & LIGHT CO.

Describes functions of the principal circulatory system organs. Considerable use of animated graphics. Suitable for 4th graders through junior high age.
PRICE: 32K DISK $29.95

TITLE: CLOCKS
PUBLISHED BY: COOKS

This is a time-guessing game. Students develop problem-solving strategies, learn to draw inferences from clues, and become more proficient with untis of time.
PRICE: 7.95

TITLE: CODE BREAKER
PUBLISHED BY: PROGRAM DESIGN

Ages 10 to adult. 3 scrmbled games of increasing difficulty that build basic word handling skills needed for good writing. First game scrambles letters with the words in the message; next 2 games scramble letters and also word order. The last game gives the hardest messages. Messages are made up by the computer from an extensive word list.
PRICE: DISK or TAPE, 14.95

TITLE: COEXIST
PUBLISHED BY: CONDUIT
COEXIST provides students with the facility to study population dynamics by simulating biological situations. By controlling the number of offspring, generation times, initial and saturation points, and inhibiting factors, students should learn about their influence on single-species populations and competition among species.

TITLE: COLLEGE BOARDS
PUBLISHED BY: KRELL SOFTWARE
The best way to sharpen your skills for the College Board SAT Exams is to work on actual examinations. Each of these 4 programs confronts the user with a virtually limitless series of questions and answers. Each is based on past SAT exams and presents material of the same level of difficulty and in the same form as used in the verbal and mathematical portions of the College Board Examinations. Scoring on each exam is provided in accordance with the formula used by College Boards.
PRICE: $19.95 - Vocabulary
$19.95 - Word Relationships
$19.95 - Math Part A
$19.95 - Math Part B
$59.95 - Complete Set

TITLE: COLORMATH
PUBLISHED BY: CONTRIBUTED PROGRAMS
Arithmetic can be interesting, but most people wouldn't call it "colorful". this program may change your opinion. Your arithmetic ability may sharpen too! 32K.
PRICE: $4.00 Cassette $6.00 Diskette

TITLE: COMPETE
PUBLISHED BY: CONDUIT
This unit of seven investigations concerning interactions between flowering plants is designed around real experiments, simulated experiments, and second-hand data in the form of graphs and tables. The computer simulation allows students to plan and carry out investigations without the long delay usually associated with growth experiments.

TITLE: COMPU-READ
PUBLISHED BY: EDU-WARE
This package of four programs is designed to have you reading thousands of words per minute! A sequence of increasingly complex skills, from simple character recognition to identification of rapidly presented words is presented in the first two programs. In the third program, vocabulary practice is provided using synonyms and antonyms as a tool. Finally, user response to high speed

sentence presentation builds skills in speed and comprehension. APPLESOFT 48K.

PRICE: DISK $24.95

TITLE: COMPU-SPELL
PUBLISHED BY: EDU-WARE

This revolutionary program in spelling is as simple as it is effective. Unlike competing products which elegantly teach your computer to creatively misspell (two "s"'s), Compu-Spell uses only positive feedback to insure accurate learning.
All displays show carefully selected spelling words in hi-resolution paragraphs, and ask the learner to replicate the correct spelling as the computer patiently monitors progress. An elaborate operating system supports use by many students in a classroom environment, while separate data diskettes make it affordable to individual home users.
The main program disk contains the Compu-Spell program, operating system, and sample spelling units chosen from each of the six available data diskettes (grade levels 4, 5, 6, 7, 8 and secretarial.) You choose a specific diskette or a coupon exchangeable for one once you have determined a suitable entry level. Compu-Spell requires a 48K Apple, ROM-based Applesoft, and a disk drive.
PRICE: $39.95 each, Main Program Disk and one data diskette
$19.95 each, Additional data diskettes (6 available)

TITLE: COMPUTER POET
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

Profound sometimes, funny sometimes, but always an original poem.
PRICE: DISK or TAPE, 14.95

TITLE: COMPUTERS WHAT ARE THEY
PUBLISHED BY: VITAL INFORMATION

A sound filmstrip program which offers a systematic, sequentially-developed approach to the essentials of computers with the beginner in mind. Classroom materials and teacher manuals. A very complete understanding of micros.

PRICE: $139.00

TITLE: CONVERT
PUBLISHED BY: COMPUTER HOUSE DIV.

Converts Metric to English or English to Metric, choose units.

PRICE: $18.00

TITLE: CROSS WORDS
PUBLISHED BY: CREATIVE DISCOUNT
The classic word game---a vocabulary builder.
PRICE: TAPE or DISK, 19.95

TITLE: THE DISTANCE GAME
PUBLISHED BY: EDUCATIONAL PROGRAMS
Program that develops mathematical reasoning and estimation skill beyond drill and practice!! For all ages.
TRS-80 16K Level II. Available for APPLE soon!
PRICE: $9.95 cassette, $14.95 diskette

TITLE: DR. DALEY'S BEST SOFTWARE
PUBLISHED BY: DR. DALEY
The following list of programs - 50 in all - formerly had a list of over $400 for the program. These are listed by title only as we don't have enough space here to describe them all. A version for the APPLE will be released about December 15, 1979 for the same prices. The package comes with about 50 pages of documentation and is packaged in an attractive binder.

SOCIAL SCIENCE AND SPORTS
1. Hamurabi
2. Dictator
3. Market
4. Football
5. Football for 2
6. Baseball

PRE-SCHOOL CHILDREN'S PROGRAM
1. Letter
2. Big Letter
3. Math
4. Faces
5. Hurkle

ELEMENTARY SCHOOL CHILDREN'S PROGRAMS
1. Math
2. Divide
3. Spell
4. Synonym
5. Hangman

ARCADE-TYPE GAMES
1. Tag
2. Deflection
3. Horse Race
4. Breakout
5. ZZZAPPP!
6. Racetrack
7. Chase
8. Mad Bomber

SCIENCE FICTION GAMES
1. Capture
2. TREK3
3. Swarms
4. Starbattle

BOARD GAMES
1. Qubic
2. Checkers
3. Othello
4. Othello for 2
5. Fox
6. Black Box
7. Backgammon
8. Conundrum
9. Obsession

MORE SERIOUS PROGRAM
1. Checkbook
2. Calendar
3. Mail List
4. Dual Density Plotting
5. Histogram Plot
6. Bar Plot

THE REST

1. Bible Book
2. Bible Quiz
3. Maze
4. Wumpus
5. Biorhythm
6. Eliza
7. Morse Code

We believe that this represents an excellent value with nearly a QUARTER of a MILLION bytes of source code in the 50 programs. The entire package is menu driven, that is each program takes care of the details of finding and loading the desired program.

PRICE: TAPE, 69.95
DISK, 79.95

TITLE: DROSOPHILIA GENETICS
PUBLISHED BY: COMPRES
MEMORY: 32K, DOS, APPLESOFT ROM

Independent assortment and recombination in unlinked loci, linked loci, or freely chosen loci.

PRICE: 50.00

TITLE: ECOLOGICAL MODELING
PUBLISHED BY: CONDUIT

This package of eight programs introduces students to techniques for modeling ecological systems and processes. Students experientially test hypothesis and predict results from ecosystems by controlling initial population size, growth rate, time length of the simulation, and other parameters.

TITLE: EDU-PAK
PUBLISHED BY: EDU-WARE

This package combines the three PERCEPTIONS, COMPU-READ and STATISTICS onto one economical diskette. (See description of these programs in this section of catalog.) APPLESOFT ROM 48K.

PRICE: DISK $39.95

TITLE: EDUCATIONAL SERIES: THE SHELL GAMES
PUBLISHED BY: APPLE COMPUTERS

THE ANIMATED APPLE

The intriguing story of how APPLE grew from a tiny flower. . .See it all in this engrossing cartoon.

MATCH MACHINE

The Magnificent Match machine displays two columns of words that match. One of the columns is scrambled. Your job is to straighten the mout! When you have matched every match, make up your own list on any subject. The Match Machine will help you make them a permanent part of the program.

PROFESSOR TRUE

A true/false quiz at its finest. Professor True will ask you interesting questions and then tell you something more about it. For example: The most famous naval battle of the Civil War was between the Monitor and the Virginia. True or False?

When you've mastered what the professor has to offer, create your own quizes; the Shell Games editor makes it fun and easy.

MR. MULTIPLE
When did the first nuclear reactor go critical? Who played the dog on TV's Cosmo Topper? How should you dress for 15 degrees Celcius? If the answers to these burning questions are keeping you awake nights, Mr. Multiple is for you.
And if you know all the answers, how about making up some questions, using the build-in Shell Games Editor.
THE SHELL GAMES is packaged to include a manual and a program diskette.
PRICE: DISK, 29.95

TITLE: EDUCATOR'S DISK SPECIAL
PUBLISHED BY: COOKS

14 Programs, menu driven, on one disk: SCRAMBLE, LEGACY TAKE IT, BAGLES, CLOCKS, TWENTY QUESTIONS* SQ. BINOMIALS, SLOPE, ALCOHOL, KEYS, BIRTHDAY, MESSAGES, FANCY FROGS, and COIN TOSSING.
PRICE: 19,95

TITLE: ELEMENTARY MATH EDU-DISK
PUBLISHED BY: MUSE SOFTWARE
The Elementary Math Edu-Disk was written and designed by a professional educator. It contains an arithmetic readiness test and four interactive lessons designed to each elementary addition, Subtraction, Multiplication, and Division, on nine different skill levels. These lessons are rich in interactive tutorials and use extensive color graphics and computer simulated voice to maintain student interest and reinforce basic concepts. The student scores are maintained on disk and are accessible only through a special teachers program (included). This program is self-demonstrating and requires little or no instructor assistance. This program is recomended for the student with no prior arithmetic experience, and as a supplement in higher level remedial situations.
48K.
PRICE: $39.95

TITLE: ELEMENTARY NUMERICAL TECHNIQUES FOR ORDINARY DIFFERENTIAL EQUATIONS

This manual is intended for a post-calculus differential equations course. The student must be familiar with the techniques of integration usually covered in a first course in calculus. The most frequently used techniques require the utilization of the standard formulas for trignometric and exponential functions and their inverses, integration by trignometric substitutions, integration by parts, and integration by partial fractions decomposition. The student must also be acquainted with the definition of a power series, its interval of convergence, and some of the more common tests for convergence. Also the calculus operations on series should be familiar.
This manual is constructed to complement a standard textbook by having the student study the numberical techniques immediately after having covered the corresponding material in the text. It is an attempt to instill a recognition of the power of numerical methods, and show a basic plan for attacking a non-standard problem. As differential equations are encountered in "real-life" applications problems, they very seldom are one of the types found in existing

textbooks for which a straightforward analytical method produces the solution. Most equations are non-linear, non-homogeneous, with non-constant coefficients, and hence non-solvable by analytical methods.
PRICE: TAPE or DISK, 65.00

TITLE: ENERGY AND ENVIRONMENT
PUBLISHED BY: COMPRES

This material is intended for use in courses dealing expressly with environmental problems, or as supplementary material in traditional physics or physical science courses.
Emphasis is on physical principles, model formualtion, and quantitative solutions, with the computer used in an interactive mode for instruction and calculation. Essential introductory material studies the tools of quantitative reasoning, including concepts of rates of change and fuctional dependencies.
The Programs:
PROFILE - Calculation stable age distributions for stationary and growing populations using U.S. martality statistics (1967)
POPULATE - To simulate a dynamic population, allowing the user to enter appropriate population statistics or use those for the United States.
ABSORB - Calculates earth surface temperature for various carbon dioxide concentrations using one-layer model atmosphere with simple absorption.
GLACIER - Solves Budyko's model (Tellus, 1969). Shows latitude dependent temperature for changes of solar constant albedo varies from .32 to .62 depending on temperature.
PRICE: TAPE or DISK, 65.00 Including Text

TITLE: ENZKIN
PUBLISHED BY: CONDUIT

This unit permits students to obtain realistic results rapidly using the computer program to simulate enzyme-catalyzed reactions. Six enzymes are simulated by the program for students to study.

TITLE: THE ESTIMATION GAME (ANIMATED!)
PUBLISHED BY: EDUCATIONAL PROGRAMS

Program that dedvelops mathematical reasoning and estimation skill beyond drill and practice!! All ages will enjoy this game.
TRS-80 16K Level II. Available for APPLE soon!
PRICE $9.95 cassette, $14.95 diskette

TITLE: EVOLUT
PUBLISHED BY: CONDUIT

EVOLUT is the Pea Model programmed for the computer. Students can vary the type of selection (against one homozygote, both homozygotes, the heterozygotes), the degree of selection, and the size and composition of the initial population, and then follow the course of natural selection for as many generations as desired.

TITLE: FAVORITE GUESSING GAMES
PUBLISHED BY: GEORGE EARL

CITIES -- Guess the State -- 338 differnt cities.
CAPITALS – Given the State or Country -- 130 different capitals.
PRESIDENTS AND V. PRESIDENTS -- Since George Washington.
FIRST LADIES – President's wives -- Since Martha Custis.
HANGMAN -- 700 everday words.
SPORTS HANGMAN -- 500 sports related words.
PRICE: DISK, 24.95

TITLE: FLIGHT SIMULATOR
PUBLISHED BY: DYNA COMP.

A realistic and extensive mathematical simulation of take-off, flight and landing. The program utilizes aerodynamic equations and the characteristics of a real airfoil. You can practice instrument approaches and navigation using radials and compass headings. The more advanced flyer can also perform loops, half-rolls and similar aerobatic maneuvers.
PRICE:

TITLE: FOOLS SPOOL
PUBLISHED BY: PROGRAMMA

This game is based on a spool with four moving wheels, each of which have eight numbers ranging from one to six. The object is to make each of the eight rows add up to twelve. This is done by moving the wheels independently. This is an excellent game of logic.
PRICE: TAPE, 6.95

TITLE: FOREIGN LANGUAGE DRILL (SPELLING DRILL I)
PUBLISHED BY: PROGRESSIVE SOFTWARE

Aids in spelling and word definition skills. User input. Displays randomly selected word and waits for User to enter correct spelling. Contains review function.
PRICE: $19.95

TITLE: FRUSTRATION
PUBLISHED BY: PROGRAMMA

Here's a real memory tester for you. It is based on one of the MOST POPULAR TV QUIZ SHOWS of the 1960's and early 1970's. FRUSTRATION will demand all of the CONCENTRATION you have to offer. The game board is in HIRES GRAPHICS. The idea of the game is to turn over two game cards at a time and try to MATCH their faces.
PRICE: TAPE, 9.95

TITLE: GEOMETRY & MEASUREMENT DRILL & PRACTICE
PUBLISHED BY: APPLE COMPUTER INC.

Studying angles and circumferences? Try sharpening your understanding with these effective Geometry and Measurement Drill and Practice programs. Recommended for students in junior high school and above, the programs test

users on areas, perimeters, lengths, angles, polygons, volumes, circles—even on clock time intervals. Material is presented on two separate diskettes, or "volumes," one elementary and one advanced.

You learn fast, because Geometry and Measurement Drill and Practice uses your Apple's high-resolution graphics to emphasize key points, and provides short explanations to help you when you get stuck. And, since you select the drills you want from a menu of options, the program is easy to use, too.

The Geometry and Measurement Drill and Practice program also: provides study information, drill options, and correct answers ... so you can use the program as a comprehensive learning tool; lets you select the number of problems you want to attempt ... so you control the time you spend on any single drill; summarizes the number of correct answers on your first and second tries ... so you can judge your progress.

It's simple to use Geometry and Measurement Drill and Practice. For instance, suppose you choose the Volume 1 diskette. Its main menu lists the drills focusing on polygons, lengths, perimeters and areas, and clock time. To choose any drill, just type its menu number on your Apple keyboard.

Let's say you choose the Polygon Drill. You can specify the polygon you'd like to be tested on—triangles, for instance—and the number of problems you want to attempt. When you've finished with the drill, your results will be automatically tabulated, summarizing how well you did. Then you'll be able to 1) repeat the same type of drill (but with different questions); or 2) return to the main menu to try a different type of drill; or 3) stop the program.

The more advanced Volume 2 programs include drills on circles, angles, perimeters/areas, and volumes/areas. If you make a mistake on your first attempt to answer a question, the program provides more assistance.

Geometry and Measurement Drill and Practice is written in Applesoft BASIC. To use it, you'll need: an Apple II Plus with at least 32K bytes RAM: or an Apple II with 32K bytes RAM and an Applesoft BASIC Firmware Card; or an Apple II with the Apple Language System. Plus: Auto-Start ROM; a video monitor or television (black & white or color); an Apple Disk II with controller (16-sector PROMs).

With the Geometry and Measurement Drill and Practice package, you'll receive: 1) Geometry and Measurement Drill and Practice program diskettes (Volumes 1 and 2); 2) user instructions.

PRICE: $50.00

TITLE: GEORGE EARL SAMPLER
PUBLISHED BY: GEORGE EARL

A sample of some of the best from each program available from George Earl. Algebra. Now available, Nursey Rhymes.

PRICE: DISK, 24.95

TITLE: INSTRUCTOR GRADEBOOK
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

Instructor Gradebook is designed to simplify the evaluation process for teachers. The package provides maximum flexibility in grading options and is entirely self-prompting. Class and individual student statistics are calculated quickly, and various reports are available as screen displays or printed copy.

TITLE: HABER
PUBLISHED BY: CONDUIT

The Haber computer simulation provides students with the opportunity to study the Haber process and how the various conditions (temperature, pressure, catalyst, and reactant concentration ratios) influence the course of the reaction (i.e., the time required to reach equilibrium yield of ammonia).

TITLE: HANGMAN
PUBLISHED BY: APPLE COMPUTERS

Includes color math demo
PRICE: 7.50

TITLE: HANGMAN
PUBLISHED BY: LAZER SYSTEMS

This program is the old traditional hangman game that we used to play as kids, with a pencil and paper. The big difference here is that the computer will choose the word from a text file that comes with over 450 words. You have the capability of changing any of the words or adding new words to the existing file. You also have the capability of starting new files and then choosing which file you wish the computer to get the words from. This is ideal for parents to put their childrens spelling words into separate files and then let the kids have a ball while learning how to spell them.
If you are not familiar with the hangman game, here is how it works. The computer chooses a word at random from the file. The computer then puts a gallows on the screen in LO-RES graphics with a line of dashes at the bottom, one dash for each letter of the word that has been chosen. You now try to guess the word by guessing 1 letter at a time. If the letter is right, that letter replaces the corresponding dash on the screen. If the letter is wrong, you will get a raspberry sound and a part of the body is displayed on the gallows. You can have up to 8 wrong guesses, at which time the entire body is standing on the floor of the gallows. On the 9th wrong guess, you get a big raspberry sound, the floor hinges down and then the rope and your neck stretches. The word is then displayed with the file reference number. If you get the word right before the 9th wrong guess you are a winner. In both cases, you simply hit the space bar and the computer chooses another word to start all over again.
Requirements: 32K Apple II or Apple II Plus and Disk Drive.
PRICE: $14.95

TITLE: HI-RES LIFE
PUBLISHED BY: RAINBOW

Conway's original equations done on the 296 X 180 Hi-Res screen. A mathematical simulation demonstrating population growth with birth, death and survival factors.

PRICE: TAPE $10.00
DISK $15.00

TITLE: HUMAN FEMALE REPRODUCTIVE CYCLES
PUBLISHED BY: COMPRES

Self-generating, induced, or annual; fertile, infertile, suppressed.
PRICE: 50.00

TITLE: INTERP
PUBLISHED BY: CONDUIT
This unit on wave superposition is designed to improve students' understanding of the use of models in physics. The unit is built around the wave theory of light and shows students how effective the theory is in explaining observed phenomena.

TITLE: IQ BUILDER: ANALOGIES
PUBLISHED BY: PROGRAM DESIGN

Teaches a method of solving word analogy problems found on tests such as the Scholastic Aptitude Test, Civil Service Tests and IQ Tests. Provides practice doing problems of varying levels of difficulty. A Guide gives strategies for answering this type of question. Age: High School, College and Adult.
PRICE: 9.50

TITLE: IQ-BUILDER: NUMBER SERIES
PUBLISHED BY: PROGRAM DESIGN

Helps develop a method of problem solving needed to do well on mathematical aptitude tests such as IQ tests of Civil Serviced Exams. Provides practice solving problems of increasing difficulty. A Guide gives problem solving strategies. Age: High School, college and Adult
PRICE: Cassette 9.50

TITLE: IQ-BUILDER: VOCABULARY
PUBLISHED BY: PROGRAM DESIGN

Provides practice in taking vocabulary tests such as Scholastic Aptitude Test. Two types of vocabulary questions are used - Synomyms and Antonyms. A guide gives strategies for answering this type of questions: Age: High School, College and Adult. 2 tapes
PRICE: Cassette 13.95

TITLE: IQ-BUILDER SERIES
PUBLISHED BY: PROGRAM DESIGN

Junior high up. A group of 4 courses that prepare a high school student for the College Boards or adult for aptitude tests.
VOCABULARY BUILDER 1: BEGINNING 11 programs include a set of graded vocabulary questions on synonyms and antonyms (the most common type of vocabulary question on an IQ test.) he last lesson is a test on vocabulary. Total of 400 questions, 2000 words in course.
VOCABULARY BUILDER 2: ADVANCED 11 programs like those in Vocabulary 1, but using a more advanced word list.
NUMBER SERIES Contains 8 programs that provide practice in a common

math problem type. The first lesson teaches how to approach number series and how to analyze their patterns. Later lessons provide practice with increasingly difficult problems, giving clues if you have difficulty with the problem. Final lesson is a test of abilities.
ANALOGIES Contains 6 programs that teach what an analogy is and what the common types are, provide a method for analyzing analogies and provide practice in handling all types of analogies. Final lesson is an analogies test.
PRICE: DISK, 14.95 EACH
TAPE, 14.95 EACH

TITLE: KEYS
PUBLISHED BY: COOKS

This deceptively simple-appearing program is fascinating for young children. It is designed to increase recognition of letters and numbers using Apple color graphics.
PRICE: 7.95

TITLE: KIDSTUFF
PUBLISHED BY: PERSONAL

Delightful assortment of puzzles, riddles, jokes, mazes and brain-teasers created for your kids by our kids.
PRICE: 12.00

TITLE: LABORATORY IN COGNITION AND PERCEPTION
PUBLISHED BY: CONDUIT
This computer-based system provides a viable alternative to traditional laboratory courses by exposing students to a variety of phenomena, theoretical points of view, techniques, and experimental designs. Six experiments covering the human information processing system are included.

TITLE: LANGUAGE ARTS
PUBLISHED BY: EDUCATIONAL ACTIVITIES

Consists of sixteen programs dealing with NOUNS, PRONOUNS, VERBS, ADJECTIVES, ADVERBS, HOMONYMS, SYSNONYMS, ANTONYMS and CONTRACTIONS.

TITLE: LANGUAGE ARTS
PUBLISHED BY: MILLIKEN
The introductory Milliken Language Arts package contains structured drill and practice for students in Letter Recognition and Alphabetization skills. The curriculum is appropriate for students in grades 1-8. A Manager Program is included that allows teachers to make assignments and review student progress. In addition, the Manager will keep a record of incorrect answers during the Letter Recognition drill. The Sequences are designed to provide individulization of both skill and performance objectives. Student interaction with the program requires little or no supervision; therefore, it may be implemented in a variety of learning environments.
The following Sequences are included in the package: Letter Recognition and Alphabetization by first & second letter (1-63) - grades 1 thru 4. Alphabetization by third letter and beyond (64-100) - grades 5 thru 8. The numbers in parentheses

represent the number of problem levels in each Sequence. Problem levels are small, sequential steps which increase in difficulty. Problem levels are precisely defined so students may be easily placed at a level which challenges their abilities. As they demonstrate mastery or failure, the computer moves them up or down a problem level.
Student Interaction: The Sequences provide students with a highly motivating, success-oriented approach to mastering Letter Recognition & Alphabetization skills. Work is completely individualized and self-paced. There is not need for paper or pencil. Feedback is immediate, as are positive reinforcements, which may be varied for primary or middle grades. If a problem is missed, the student is provided with the correct answer immediately. Scoring and record-keeping are automatically maintained.
Management: The package contains a Manager Program which enables teachers to maintain individual records for up to 100 students on each diskette. Features of the Manager include: The ability to make personalized assignments for individuals, or general assignments for classes. The ability to establish individualzed "mastery" and "failure" levels for students. Teachers can also influence the amount of work each student completes at assigned problem levels. Automatic updating of student performance records with hard-copy print-outs, if desired. Progress graphs which make problem areas for individual students easily identifiable. A security system which keeps all student data confidential.
Documentation: Milliken's comprehensive Teacher's Guide is an important part of the total courseware package. The Guide includes: Basic procedures to help teachers use the courseware effectively. Scope and Sequence charts. Examples of typical questions generated at each problem level. Step-by-step instructions for using the Manager Program. An Easy-Does-It-Card which provides students with illustrated instructions for operating the courseware. Duplicating masters for optional record-keeping.
Additional Language Arts Packages. Several Language Arts programs are scheduled for release in the near future. Packages covering Grammar and Usage, and Reading will be introduced during the 1980-81 school year. The balance of the Study Skills package, which will include Letter Recognition and Alphabetization, will be available at the beginning of the 1981-82 school year.

PRICE: $75.00
Replacement Diskettes $40.00

TITLE: LANGUAGE DRILL
PUBLISHED BY: SOFT ONE

Language Drill program is used for vocabulary drill in foreign language. Language used may be any language you select to enter. Number of words which can be entered are limited only by the capacity of your computer memory. Can be used by one or two persons and score can be kept.
PRICE: Cassette 7.50

TITLE: "LEARNING-FUN" DUO™
PUBLISHED BY: MALIBU MICROCOMPUTING

Especially designed for young children. Combines learning with fun! Program 1: "TELL-TIME" interacts with the child in color, and HI-RES GRAPHICS to facilitate learning to tell time. Program 2: "SUPER RACE CAR" is the popular head-on collision type arcade game with simpilfied two finger control for children. Hours of learning and fun. 32K, Applesoft/Machine Language.

PRICE: $14.95

TITLE: THE LIGHT PEN QUIZ
PUBLISHED BY: CHARLES MANN & ASSOCIATES

The Light Pen Quiz is a general purpose lesson creation program for use with CMA'S light pen (available separately).
The system allows teachers to create student quizzes for students to use as part of their regular classroom instruction. The multiple choice quizzes may be designed with additional supplementary information or positive reinforcement elements. The students can use the system by using a light pen for inputs.
The system includes teacher review elements which allow teacher editing of material. Teachers may check student progress and prepare grades for each session. Lessons on line are limited only by the number of diskettes available.
The system requires Applesoft, 32K and a single disk drive.
PRICE: $49.95

TITLE: LINKOVER
PUBLISHED BY: CONDUIT

This unit allows students to plan and execute a program of experiments to draw a genetic map of a single chromosome. The student specifies a series of genetic crosses and from the resulting data builds up a linkage map for ten genes of a hypothetical diploid species using the three-point testcross technique.

TITLE: MAGIC SQUARES
PUBLISHED BY: PROGRAMMA

Magic Squares is a challenging game of logic and foresight with three levels of difficulty, beautifully displayed in hi-resolution graphics. The object of Magic Squares is to manipulate the cubes into a predetermined pattern. Success is based upon your ability to plan ahead. Optimize your score by limiting needless moves. The random generator creates a unique matrix every time. Warning!! Magic Squares has been proven to be highly addictive!!
By David Kalmickorder
PRICE: 9.95

TITLE: MAP READING
PUBLISHED BY: MICRO POWER & LIGHT CO.

Presents the concepts of direction and distance. Works through scale exercises, step by step. Intended for 4th graders and older.
PRICE: TAPE $14.95
DISK $19.95

TITLE: MATH DRILL
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

How are your math skills? Let Math Drill help you improve them. You can choose the type of problem you wish to practice — addition, subtraction, multiplication, division or mixed. You may also choose large or small numbers, whether or not to have a time limit, and how long the limit is to be.

TITLE: MATH DRILL I & II
PUBLISHED BY: PROGRESSIVE SOFTWARE

Decimal arithmetic problems and fraction problems (Add., Subtr., Multi., Div., or mixed). User selects type of operation and degree of difficulty. (Gr. 1-7).
PRICE: $19.95

TITLE: MATH FUN
PUBLISHED BY: INSTANT SOFTWARE

Change an Apple computer to a mathematics tutor — and change boredom into enthusiasm with the Math Fun package. Using the technique of immediate positive reinforcement, students can improve their math skills while playing a game with:

HANGING — A little man is walking up the steps to the hangman's noose. But YOU can save him by answering the problems posed by the computer. The program uses decimal math problems. Each correct answer will move the man down the steps and cheat the hangman.

SPELLBINDER — You are a magician competing against a computerized wizard. In order to cast death clouds, fireballs and other magic spells on him, you must correctly answer questions about using fractions.

WHOLE SPACE — Pilot your space craft to attack the enemy planet. Each time you give a correct answer to the whole number problems posed by the computer, you move your ship. But for every wrong answer, the enemy gets a chance to fire at you.

CAR JUMP — Make your stunt car jump the ramps. Each correct answer will increase the number of buses your car must jump over. These problems involve calculating the areas of different geometric figures.

ROBOT DUEL — Fire your laser cannon at the computer's robot..If you give the correct answer to problems on calculating volumes, your robot can shoot at his opponent. If you give the wrong answer, your shield power will be depleted and the computer's robot can shoot at yours.

SUB ATTACK — Practice using percentages as you maneuver your sub into the harbor. A correct answer lets you move your sub and fire at the enemy fleet.

PRICE: $19.95

TITLE: MATH-TER-MIND
PUBLISHED BY: ALLADIN

This delightful, yet educational program in the Aladdin Education™ series will give your pre-school shild the oppotunity to learn the skills of elementary arithmetic, and have fun at the same time.

With this unique learning program you can share in your chil's captivated excitement as both of you watch the mathmetician whose face appears on the screen.

Share, too, the feelings of accomplishment, fun and learning as your shild determines the correct answer and makes the mathmetician's face break into a big smile.

With Aladdin's Mth-Ter-Mind, your child's pathway to learning will be fun-filled. . .for both of you.

PRICE: TAPE, 11.95

TITLE: MATHEMATICS
PUBLISHED BY: MILLIKEN

The Revised Milliken Math Sequence package replaces the previous package, effective October 1, 1980. The new 12 diskette package offers a comprehensive, objective-based curriculum with structured drill and practice for students in grades 1-8. Manager Program is included that allows teachers to make assignments and review student progress. The Sequences are designed to provide individualization of both skill and performance objectives. Student interaction with the program requires little or no supervision; therefore, it may be implemented in a variety of learning environments.

Curriculum: The scope of Milliken curriculum is substantial. The following Se-

quences are included in the package: Number Readiness (16) - grade 1. Addition (60) - grades 1 thru 8. Substraction (54) - grades 1 thru 8. Multiplication (62) -grades 2 thru 8. Division (64) - grades 3 thru 8. Laws of Arithmetic (19) - grades 1 thru 8. Integers (32) - grades 6 thru 8. Fractions (36) - grades 3 thru 8. Decimals (56) grades 4 thru 8. Percents (15) - grades 6 thru 8. Equations (26) - grades 7 thru 8. Measurement Formulas (25) - grades 5 thru 8. The numbers in parentheses represent the number of problem levels in each Sequence. Problem levels are small, sequential steps which increase in difficulty. Problem levels are precisely defined so students may be easily placed at a level which challenges their abilities. As students demonstrate mastery or failure, the computer moves them up or down a problem level.

Student Interaction. The Sequences provide students with a highly motivating, success-oriented approach to mastering mathematics skills. Work is completely individualized and self-paced. All computations can be performed on the screen, elimating the need for paper and pencil. Feedback is immediate, as are positive reinforcements, which may be varied for primary or middle school grades. If a problem is missed, the student is provided with a step-by-step solution. Scoring and record-keeping are maintained automatically.

Management. The package contains a Manager Program which enables teachers to maintain individual records for up to 100 students on each diskette. Features of the Manager include: The ability to make personalized assignments for individuals, or general assignments for classes. The ability to establish individualized "mastery" and "failure" levels for students. Teachers can also influence the amount of work each student completes as assigned problems levels. Automatic updating fo student performance records with hard-copy printouts, if desired. Progress graphs which make problem areas for individual students easily identifable. A security system which keeps all student data confidential.

Documentation: Miliken's comprehensive Teacher's Guide is an important part of the total courseware package. The Guide includes: Basic procedures to help teachers use the couseware effectively. Scope and Sequence charts. Examples of typical problems generated at each problem level. Step-by-step instructions for using the Manager Program. An Easy-Does-It Card which provides students with illustrated instructions for operating the courseware. Duplicating Masters for optional record-keeping.

Additional Packages: The revised Math Sequences package, is only available for the Apple II Plus (48K) with disk drive. The program is contained on 12 diskettes. Another version of the program, on 12 cassettes, is available for the Commodore Pet (8K) and TRS-80 (16K, Level II). Please note: these programs contain an abbreviated 1-6 curriculum and no management capabilities.

PRICE: Math Sequences, 12 Diskettes for Apple II Plus (48K) $450.00
Extra Set of 12 Diskettes for back-up $675.00
Math Sequences, 12 Cassettes for TRS-80 (Level II, 16K) $200.00
Math Sequences, 12 Cassettes for Commodore Pet (8K) $200.00
Replacement Diskette $40.00
Replacement Cassette $20.00

TITLE: MEMORY BUILDER
PUBLISHED BY: PROGRAM DESIGN

CONCENTRATION Ages 6 and up. A series of educational games to improve memory, attention span and concentration. Letters and 3-letter words are used. Player has three options: play against the computer, play against him or herself, play against another player. Especially good for parent and child to play together.

PRICE: DISK or TAPE, 14.95

TITLE: A MEMORY MYTH
PUBLISHED BY: MICRO POWER & LIGHT CO.

Provides the opportunity to both challenge and develop memory skills. Variables include image size, ordering and time. Designed for use by adults as well as children.

PRICE: 16K, TAPE $14.95
32K, DISK $19.95

TITLE: MEDELIAN GENETICS
PUBLISHED BY: COMPRES

A Problem Solving Approach.
Table of Contents
Intorduction: To the Student
Section A: Dominance and Recessiveness
Section B: Partial Dominance
Section C: Lethality
Section D: The Physical Mechanism of Inheritance
Section E: Multiple Alleles in a Population
Section F: Sex Linkage
Section G: Multi-trait Inheritance
Section H: Linkage of Traits
Section I: Crossing Over and Mapping of Genes
Epilogue: The Compexity of Inheritance in Nature
Appendix: Student Guide to GENIE
Answer Section
Mendelian Genetics may be used alone or together with:
GENIE an interactive computer-simulated laboratory in Medlian Genetics written in BASIC. It can simulate a wide range of genetic phenomena including dominance, partial dominance, lethality, linkage, and sex linkage. As many as three traits may be simulated at any relative map location on the same or different chromsomes. Multiple allele system may have as many as five alleles and may display any possible combination of dominance and partial dominance. Use of the program is divided into units within which specific phenomena are explored according to instructor specification.
In the TEST mode the student is presented with a series of sample populations whose genetic characteristics are determined by instructor specified templates. The student must diagnose the characteristics by making a series of matings; the program will then check the diagnosis.
There is also an EXPERIMENT mose in which the student can define the characteristics of the sample.
GENIE may be used by itself or with MENDELIAN GENETICS: A Problem Solving Approach. A student Guide to GENIE is included in the text.
PRICE: 60.00

TITLE: MICROTRIVIA
PUBLISHED BY: TRANS DATA

What happened on Napolean's wedding night. . .In Star Wars, who was the leader of the Storm Troopers. . .What do Jumbo and Triger have in common. .? The answer to these and dozens of other weird, wonderful questions are found in MICROTRIVIA. Match your wits with Ralph the Trivial Computer and then,

when rendered witless, inflict the same fate on your unsuspecting friends. Microtrivia is not a serious, educational simulation designed for PHD candidates and is best played at a party, along with plenty of food and drink!
PRICE: 12.00

TITLE: MINICROSSWORD
PUBLISHED BY: PROGRAM DESIGN

All ages. 4 programs that consist of 2 minicrosswords and 2 codeword games. Crossword programs invent their own crosswarod puzzles-dozens of completely different puzzles are possible-and score how well you do each puzzle. When used in conjuction with the codeword programs, which are word-guessing games, the course provides a vocabulary and spelling development system.
PRICE: DISK or TAPE, 14.95

TITLE: MONTY™ PLAYS SCRABBLE
PUBLISHED BY: RITAM CORPORATION

"MONTY™ plays Scrabble," which will be released has a number of striking features: virtual disk storage techniques allowing a 90K program to run on a 16K microcomputer, tens of thousands of words (an entertaining way to expand your vocabulary!), and selectable skill levels. MONTY™ even continues to "think" while you plan your move.
MONTY™ computer opponent programs bring new life to recreational software. We hope you have as much fun playing with MONTY™ as we had creating him.

TITLE: MORSE CODE
PUBLISHED BY: PROGRESSIVE

This program allows the user to learn morse code by the user typing in letters, words or sentances in english. Then the dots and dashes are plotted on the screen. At the same time sounds are generated to match the screen's output. Several transmission speed levels are available.
PRICE: TAPE, 9.95

TITLE: MORSE CODE TRAINER
PUBLISHED BY: RAINBOW

An excellent program which will train you in Morse Code. Can also be used to transmit and receive code over the radio when you don't feel like concentrating. Speed 1-100 WPM.

PRICE: TAPE $10.00

TITLE: MOTHER GOOSE RHYME PROGRAMS
PUBLISHED BY: GEORGE EARL

A fun way to inspire reading mastery for the pre-school and early elementary grade shildren. A total of 660 screen pages with the child typing an answer on each page.
PRICE: DISK, 24.95

TITLE: MULTIPLE CHOICE FILES
PUBLISHED BY: EDUCATIONAL SOFTWARE

This program has all the features of STUDY-QUIZ FILES with the exception that the quizes have mulitple choice format. Program requires 48K Applesoft.
PRICE: DISK, 19.95

TITLE: MY ABC'S
PUBLISHED BY: SOFTAGON INCORPORATED

MY ABC's teaches children — even those with no knowledge of the alphabet — to start developing reading skills. Children get a headstart with my ABC's. MY ABC's increases a child's intellectual capabilities through the use of repetitive word-and-picture association, without adult supervision.
MY ABC's will also benefit the more advanced child in his or her spelling and reading development. SOFTAGON's unique System compliments children's educational t.v. programs and goes even further by allowing children to interact directly (by sight and sound) with the System and to progress at their own pace. It has been proven that the average person uses only ten percent of his brain power. With SOFTAGON educational systems, children can learn to increase their learning ability — thus increasing the use of the intellect. SOFTAGON's original computer programs stimulate a child's mind at an early age and make learning an enjoyable experience.
PRICE: DISK $19.95

TITLE: NEWTON
PUBLISHED BY: CONDUIT

Using this program to simulate Newton's experiments, students are able to investigate Newton's Law of Gravitation and Second Law of Motion, and the relationship between these models.

TITLE: NOW I CAN RHYME
PUBLISHED BY: SOFTAGON INCORPORATED

NOW I CAN RHYME increases a child's vocabulary because rhymed words are easy to remember. NOW I CAN RHYME is a unique way to build a child's word list and to assist in memory retention while enhancing creativity. NOW I CAN RHYME requires a minimum of adult supervision and enables a child to progress at his or her own pace.
NOW I CAN RHYME stimulates a child's interest in the English language and makes learning fun. This SOFTAGON program is designed to develop sound endings of words by identifying them with pictures.
It has been proven that the average person uses only ten percent of his brain power. With SOFTAGON educational systems, children can learn to increase their learning ability — thus increasing the use of the intellect. SOFTAGON's original computer programs stimulate a child's mind at an early age and make learning an enjoyable experience.
PRICE: DISK $19.95

TITLE: THE NUCLEIC ACID CONNECTION
PUBLISHED BY: COMPRES
MEMORY: 32K, DOS, APPLESOFT ROM
Creates a gene, displays the complementary message and the resultant protein, then provides for mutation based on selected mutagenic agents (chemical and radiational).
PRICE: 50.00

TITLE: NUMBER GUESS
PUBLISHED BY: PSE
MEMORY: 4K
Play the computer to guess random number with clues like "too high" or "too low". Simple kid game.
PRICE: 5.00

TITLE: NUMBER GUESS WITH MUSIC
PUBLISHED BY: PSE

Variation of number guessing game but uses graphics and musical tone with answers.
PRICE: 5.00

TITLE: NUMBER JUMPER
PUBLISHED BY: PSE
MEMORY: 4K BASIC
Game where you play the odds to arrange a set of numbers in sequence within limited number of moves.
PRICE: 5.00

TITLE: NUMBER REVERS
PUBLISHED BY: PSE
MEMORY: 4K
Game of mental skill where you arrange a set of numbers in order by telling the computer to reverse the left most group past a select point.
PRICE: 6.00

TITLE: NUMBER SERIES
PUBLISHED BY: PROGRAM DESIGN

Contains 8 programs that provide practice in a common math problem type. The first lesson teaches how to approach number series and how to analyze their patterns. Later lessons provide practice with increasingly difficult problems, giving clues if you have difficulty with the problem. Final lesson is a test of abilities.
PRICE: 13.50

TITLE: PERCEPTION
PUBLISHED BY: RAINBOW

Three separate programs which challenge and improve your visual skills. I--Match Hi-res lines drawn by the computer, with your own controlled by the paddle. (Game control paddles required.) II--test your powers of observation with a World War II test for spy candidates. A narrow mask travels over a random figure, showing you only small glimpses at a time. (48 Difficulty lelvels in all). III--your visual memory must distinguish sizes of idetnical shapes. You control the shape, display time and presentation format. (Perception I requires ROM Applesoft).

PRICE: 19.95

TITLE: PERQUACKEY
PUBLISHED BY: POWERSOFT
MEMORY: 16K, APPLESOFT

An exciting vocabulary game which pits the player against the clock. The object of the game is to form words from a group of 10 letters which the computer chooses at random. The words must be 30 to 10 characters in length with no more than 5 words of any particular length. Each player has only 3 minutes per turn. The larger the words the higher the score.

PRICE: Tape, $9.95

TITLE: PLANETS
PUBLISHED BY: PROGRAMMA INTERNATIONAL

PLANETS is numero uno in a series by Dr. Mark Cross designed to be a highly entertaining as well as educational 'mini-movie' about our solar system. One by one each of the nine planets and their moons are displayed and/or described on the screen, giving you factual and important data about each. Brilliantly animated in Hi-Res graphics. APPLESOFT (ROM or RAM) 48K.

PRICE: TAPE $15.95

TITLE: POPULATION GROWTH
PUBLISHED BY: COMPRES
MEMORY: 32K, DOS, APPLESOFT ROM

A Problem Solving Appraoch.
Table of Contents
Intorduction: To the Student
Section A: Population Growth
Section B: Density and Population Growth
Section C: Fluctuating Population Growth
Section D: Delayed Responses to Change in Regulating Factors
Section E: Emigration and Immigration
Section F: Age Structure and Survivorship
Epilogue: Additional Aspects of Population Growth
Appendix: Student Guide to POPGROW
Answer Section
Population Growth may be used alone or together with:
POPGROW an interactive computer-simulated laboratory in population

growth written in BASIC. It is based on a simple algebraic model of population growth which is ideal for the instruction of beginning students of biology, ecology, and related fields such as wildlife management. The approach is particularly appropriate for those who will go on to practical problems and computer modeling. The program is used in a sequence of 4 units - exponential growth, density-dependent growth, variations in carrying capacity, and delays in regulatory response. While the model is simple, easy to manipulate, and closely tied to underlying biology, the patterns of growth which can be simulated are quite complex. The program is designed to encourage systematic exploration of each biological factor.
POPGROW may be used by itself or with POPULATION GROWTH: A Problem-Solving Approach. A Student Guide to POPGROW is included in the text.
PRICE: 60.00

TITLE: POPULATION SIZES
PUBLISHED BY: COMPRES
MEMORY: 32K, DOS, APPLESOFT ROM
A series of population growth programs of increasing complexity affording your students the opportunity of comparing "difference" equation and "differential" equation solutions.
PRICE: 50.00

TITLE: POPULATIONS GENETICS
PUBLISHED BY: COMPRES
MEMORY: 32K, DOS, APPLESOFT ROM
Hardy-Weinberg. Mutation, Selection, Migration and Drift on alleles in a population.
PRICE: 50.00

PRICE: TAPE $49.00
DISK $54.00

TITLE: PREDATION
PUBLISHED BY: COMPRES
MEMORY: 32K, DOS, APPLESOFT ROM
Interactions between a predator and two competing prey species.
PRICE: 50.00

TITLE: PRESCHOOL IQ BUILDER
PUBLISHED BY: PROGRAM DESIGN
Ages 3-6. Teaches vital cognitive skills that children must learn in order to do well in school. In part 1, Same and Different, the child discriminates between two forms. In Part 2, Letter Builder, the child matches a letter on the tv monitor to one on the keyboard. Accompanying Parent's Guide gives instruction.
PRICE: DISK or TAPE, 14.95

TITLE: PRIME NUMBER GENERATOR
PUBLISHED BY: CRITERION
This Applesoft I Program allows the user to print out all the prime numbers in a given range from 3 to the maximum allowed by Applesoft (a very large number). It uses a very efficient algorism to calculate the primes quickly.
PRICE: 4.95

TITLE: QUIZ MASTER-MOVIE TRIVIA — QUIZ MASTER-COMPUTER TERMINOLOGY
PUBLISHED BY: LAZER SYSTEMS

Quiz Master is a series of multiple choice question answer diskettes on selected subjects. Each diskette is full and has approximately 1000 questions on the specified subject. The first two subjects are Movie trivia and Computer terminology.

The program that accesses the massive text file containing the questions and answers is designed so that you WILL learn about the subject. This is accomplished by requiring you to try another answer, if you miss a question, until you set it right. This way, you will know the correct answer before you continue on to the next question.

The operation of the program is very simple. First you are asked which question you would like to start with. When the question session starts, the number of correct and wrong answers is continuously displayed along with the percentage. This way you will always know how well you are doing. When you are tired and wish to end the session, you will be given the option to review the questions that you missed.

This system has been found to be a quick and easy way to learn about the subject matter.

Future offerings may be Star Trek, History, Science and a multitude of other topics.

Requirements: 16K Apple II or Apple II Plus and Disk Drive.

PRICE: $12.95

TITLE: READING COMPREHENSION: WHAT'S DIFFERENT?
PUBLISHED BY: PROGRAM DESIGN

Ages 8 and up. 10 reading comprehension programs which present logical problems where the student picks the one word in four which doesn't belong with the rest. Builds analytical skills essential for understanding what you read.

PRICE: DISK or TAPE, 14.95

TITLE: READINGS IN LITERATURE
PUBLISHED BY: GEORGE EARL

A challenging way to memorize famous readings. Decorated withMondrian displays. GETTYSBURG ADDRESS -- THE TIGER -- CASEY AT THE BAT -- FATHER WILLIAM – TO BE OR NOT TO BE – THE SEVEN AGES OF MAN -- O CAPTIAN! MY CAPTIAN! -- ANNABEL LEE -- BILL OF RIGHTS -- DECLARATION OF INDEPENDENCE

PRICE: DISK, 24.95

TITLE: RKINET
PUBLISHED BY: CONDUIT

This unit makes use of a computer program in which a mathematical model represents the ways in which various factors influence the rate of a chemical reaction. The model, based on data from real experiments, will broaden students' knowledge of first- and second-order reactions, rate constants, concentration, and the effect of temperature variation on reaction rate.

TITLE: ROSTER
PUBLISHED BY: PROGRESSIVE SOFTWARE

A complete package for Educators! Roster is a general purpose disk-based record-keeping program for teachers at all levels. It allows instructors to create and change class roster label, enter and change test or assignment scores, sort the roster based on student number, student name, or rank in class, assign character or numeric grades based on any of five criteria (raw score, percent, rank, percentile rank or Z-score) and List scores, totals (or averages), and/or grades according to any of these options.

PRICE: $49.95 plus $4.95 Postage and Handling.

TITLE: SCATTER
PUBLISHED BY: CONDUIT

Because of the experimental difficulties in performing certain nuclear scattering investigations, models of three experimental situations have been programmed for computer simulation. The programs give students experience in deducing the size, shape, and force law of a single scattering center, and the scattering of alpha particles by a metal foil.

TITLE: SCIENTIFIC METHOD
PUBLISHED BY: MICRO POWER & LIGHT CO.

Covers observation, generalization, measurement and verification. Simulates an experiment. Intended for 5th graders and older.

PRICE: TAPE $14.95
DISK $19.95

TITLE: SCRAMBLE
PUBLISHED BY: PROGRAMMA

The scrambled word is 'PLPEA'. Can you unscramble it within the aloted time? This program is not only entertaining, but educational as well. Change the level of difficulty by varying the time limit from 3 to 90 seconds. In addition, the program's word table can be cleared or added to easily.

PRICE: 6.95

TITLE: SECRET WRITING
PUBLISHED BY: WISE OWL

Apple computer can create a code that can't be broken. If you don't believe it, there is a $100.00 reward for the first person to decode the message in the instruction booklet. This program can be used to kepp a secret diary, kepp records secret, or send secret messages to someone. Once you have encoded and recorded your message no one, unless they know the easily remembered keys, can read what you have recorded and retrieved from cassette tape.

PRICE: CASSETTE, 11.95

TITLE: SENTENCE COMPLETION
PUBLISHED BY: SLIWA ENTERPRISES

Equivalent to 6 SAT tests.

PRICE: $19.95

TITLE: SENTENCES
PUBLISHED BY: MICRO POWER & LIGHT CO.

Addresses the identification of subjects, simple subjects, verbs, predicates, and sentence fragments. Intended for elementary and secondary age students.

PRICE: 32K, DISK $24.95

TITLE: SEX ROLE
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Are you androgynous? This program helps you to examine your nature, behavior and attitudes in light of society's changing concept of sex roles.

TITLE: SHELL GAMES
PUBLISHED BY: APPLE COMPUTER

THE ANIMATED APPLE - The intriguing story of how APPLE grew from a tiny flower ... see it all in this entertaining cartoon.
MATCH MACHINE - The Magnificent Match machine displays two columns of words that match. One of the columns is scrambled. Your job is to straighten them out! When you have matched every match, make up your own list on any subject. The Match Machine will help you make them a permanent part of the program.
PROFESSOR TRUE - A true/false quiz at its finest, Professor True will ask you interesting questions and then tell you something more about them. For example: The most famous naval battle of the Civil War was between the Monitor and the Virginia. True or False?
When you've mastered what the professor has to offer, create your own quizzes; the Shell Games editor makes it fun and easy.
MR. MULTIPLE - When did the first nuclear reactor go critical? Who played the dog on TV's Cosmo Topper? How should you dress for 15 degrees Celcius? If the answers to these burning questions are keeping you awake nights, Mr. Multiple is for you.
And if you know all the answers, how about making up some questions, using the built-in Shell Games Editor. Manual included. INTEGER. 48K.

PRICE: DISK $29.99

TITLE: SIRIUS
PUBLISHED BY: PROGRAMMA

This is an educational Hi-res Mini-movie. It is a display of Sirius and it's white dwarf and their interactive orbits. Highly educational.

PRICE: TAPE, 15.95

TITLE: SOME AIRCRAFT INSTRUMENT TRAINING
PUBLISHED BY: P.S.E.

Aircraft instrument training simulator for Apple II. Your Apple teaches basic instrument flying.

PRICE: Cassette or disk 19.95

TITLE: SPANISH
PUBLISHED BY: GEORGE EARL

SPANISH HANGMAN -- 700 Spanish words.
SPANISH PHRASE HANGMAN -- over 200 phrases.

SPANISH-ENGLISH DRILL.
ENGLISH-SPANISH DRILL.
PRICE: DISK, 24.95

TITLE: SPEED READING
PUBLISHED BY: SOFTWARE TECHNOLOGY FOR COMPUTERS
Program diskette and instruction manual.
PRICE: $200.00

TITLE: SPELLING
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE
(Requires Applesoft or Applesoft II BASIC)
Do you need practice spelling? Let APPLE's Spelling program lend a hand. You are shown a word and asked to spell it when it disappears. Grades from A + to F are given depending on how many you get correct. The better you are, the shorter time you see the hint word.

TITLE: SPELLING
PUBLISHED BY: EDUCATIONAL ACTIVITIES
These programs include **Scrambled Letters** and **Flash Spelling**. Using **Scrambled Letters,** students compete to correctly spell the scrambled word. In **Flash Spelling**, a word is flashed on the monitor, and the student must then type the word correctly.

TITLE: SPELLING BUILDER
PUBLISHED BY: PROGRAM DESIGN
Junior high and up. 8 programs plus an audio cassette teach important spelling rules and skills. Helps students and adults overcome spelling difficulties. Not just spelling drill, this course teaches a method for approaching difficult words. Ideal for the student or adult who has mastered basic spelling but has trouble deciding if it's "supersede" or "supercede", "combustable", or "combustible". Final test of 25 ten-word lists.
PRICE: TAPE or DISK. 18.95

TITLE: SPELLING RULES
PUBLISHED BY: MICRO POWER & LIGHT CO.
Sets forth guidelines for application of the 6 most common rules. Numerous exercises in game settings. Designed for elementary and secondary age students.
PRICE: 32K, Disk $29.95

TITLE: SPORTSTRIVIA
PUBLISHED BY: PERSONAL

Sportstrivia takes some of the more popular sports such as football, golf and hockey and quizzes you on such subject areas as nicknames, individual and team wins and dates. The game can be played by a single sports fan or can entertain a whole cheering section. Sportstrivia is the microcomputer answer to the sports maniac in your house.

TITLE: STATE CAPITALS
PUBLISHED BY: CREATIVE DISCOUNT
MEMORY: 16K

What is the Capital of North Dakota? The Apple knows.
PRICE: TAPE or DISK, 24.95

TITLE: STATE CAPITALS
PUBLISHED BY: PROGRAMMA
MEMORY: 16K, INTEGER BASIC

This program displays a Lo-res man of the U.S.A. with each capital of each state plotted on the map. You try to guess the name of each capitol. Highly educational.
PRICE: TAPE, 9.95

TITLE: STORY BUILDER/WORD MASTER
PUBLISHED BY: PROGRAM DESIGN
MEMORY 16K

Ages 9 up. Series of partially completed verses that the child completes. Teaches grammar skills in an enjoyable way. Word Master is a logic game where the child tries to guess a 3-letter word generated by the computer. Teaches reasoning and vocabulary.
PRICE: TAPE or DISK, 14.95

TITLE: STORY TELLER
PUBLISHED BY: EDU-WARE

For the frustrated author, this game produces stories by the millions. All that is required is the input of a few words, and a little knowledge of the bizarre. Fascinate your friends with your new found literary abilities, and keep them laughing over your efforts. "Help" routines let you master the various parts of speech, and an unlimited library of randomly generated tales reward your efforts. APPLESOFT. 32K.

PRICE: TAPE $14.95
DISK $19.95

TITLE: SUBLIMINAL
PUBLISHED BY: EDU-WARE
MEMORY: 32K
HARDWARE: DISK

Used in much of the advertising to which we are all constantly exposed, subliminals are hidden, emotionally charged words or symbols. The impact of these emotionally charged words is clearly demonstrated as they effect your preferences in an ever-changing graphic design. The computer's summary illustrates these effects. You can construct the word files yourself, with an accompanying file-builder or use the words provided.
PRICE: DISK, 15.95

TITLE: SUPERMAP
PUBISHED BY: APPLE COMPUTER INC.

Wish you could make geography more enjoyable and capitals more captivating? Try Supermap, an easy, fun way to learn about the continental United States. Simply type in the name of a city. If it's contained in the program's data base (which has over 300 cities), Supermap will show you where the city's located on

any one of four, full-color maps, and provide you with some important facts about the city—including population, ZIP code, longitude and latitude.
Supermap also: displays the distance between two cities in both miles AND kilometers ... so you become familiar with metric equivalents; puts maps, facts, and figures at your fingertips ... so you save time searching through atlases and almanacs; electronically highlights the locations of cities ... so you're left with a lasting sense of geographic relationships.
Supermap's main menu lets you choose five options. The State Capital Quiz prompts you with a state name, then waits for you to spell correctly the corresponding capital name. If you're right, Supermap blinks the city's location and beepsthat you're correct; if you're wrong, you get two more guesses before Supermap fills you in. A special Scan Cities option lets you run through the entire list of cities in the data base at your own speed, lighting up locations and beeping as you go.
Other options let you view the continental United States in four different ways. The State Map, with the 48 states highlighted in dazzling colors, allows you to study the states in relation to one another. A Features Map displays the five, dominant ecological regions of the U.S.: Crops, forest, grasses, desert, and swamp. When you instruct Supermap to locate a city on the Features Map, you'll have a good idea whether its inhabitants grow cactus or cucumbers. The January and July Sun Maps show mean daily solar radiation (in langleys) at ground level during those months.
Supermap is written in Applesoft BASIC. To use it, you'll need: an Apple II Plus with 48K bytes RAM; or an Apple II with 48K bytes RAM and an Applesoft Firmware Card; or an Apple II with the Apple Language System. Plus: Auto-Start ROM; an Apple Disk II with controller (16-sector PROMs); a video monitor or television (color recommended).
With the Supermap package, you'll receive: 1) Supermap program diskette; 2) instructions.
PRICE: $35.00

TITLE: TACHISTOSCOPE
PUBLISHED BY: SOFT ONE

This Tachistoscope program is used to increase a persons capability to recognize words and characters. It increases the speed and comprehension of reading. Set up for participation by one or two people and keeps score.
PRICE: Cassette 9.50

TITLE: THE TALKING CALCULATOR
PUBLISHED BY: SOFTAPE

The Talking Calculator is a Software program which transforms your Apple II into a talking, 10 digit calculator. This program uses APPLETALKER subroutines (included) and will"say" the answer to math problems as well as print them on the screen. Simply load THE TALKING CALCULATOR and discover the real power of your Apple II microcomputer. Great for home, office or school work. Fixed or Floating point Arithmetic.
PRICE: $12.95 Cassette

TITLE: TEACHERS' AIDE I AND II
PUBLISHED BY: EDUCATIONAL SOFTWARE PROFESSIONALS, LTD.

TEACHERS' AIDE I and II allows the teacher to construct quizzes and tests which are stored on the disk as text files. The teacher then has complete control over the editing and revision of these files. It also, allows individual students to take the teacher constructed quiz or test on the computer and then automatical-

ly saves the individual student's score to a score file created by the teacher.
PRICE: $19.95

TITLE: TOUCH TYPING TUTOR
PUBLISHED BY: PROGRESSIVE SOFTWARE
Teaches typing. Indicates speed and errors made. Finger Builders; General Typing; Basic Language and User Supplied. Diskette. (Applesoft or Integer).
PRICE: $19.95

TITLE: TYPING
PUBLISHED BY: COOKS
This is a combination of programs which provide instruction on finger placement and drill for touch typing on the Apple keyboard. Drills are graduated in difficulty beginning with 'home base' keys and progressing through a planned sequence of words and phrases.
PRICE: Disk 14.95

TITLE: TYPING TUTOR
PUBLISHED BY: MICROSOFT
There's no easier way to master your keyboard.
Does the "hunt and peck" method of typing slow you down? Are you a great programmer but a lousy typist? Do you wish you could type without looking at the keys? Want to improve your typing speed and accuracy?
Now, you can turn your personal computer into the Aristotle of Typing Tutors! Microsoft's Typing Tutor is for everyone but the most advanced typists. Faster and more efficient than any other teaching method available, it takes you through four levels of typing proficiency, from beginner to advanced.
Typing Tutor and TRM™
The advantages of Microsoft's Typing tutor lie in its exclusive TRM™ software. TRM™, which stands for "Time Response Monitoring," is a unique system for monitoring the keyboard 20 time a second (four times faster than the fastest typists). The information received from TRM™ is analyzed by the computer to monitor your skills and progress.
Microsoft's Typing Tutor kepps track of the keys you know, the keys you are learning, and, of course, the keys you don't know. This knowledge is used to create completely individualized typing drills for increasing your speed and accuracy. These drills are based on Typing Tutor's built-in vocabulary.
Typing Tutor is specifically tailored to the keyboard of your make of computer. The special characters !¶ @$%¢¢*(), That you use when programming your computer are included in the drills that Typing Tutors prepares. Numbers are also given special emphasis to help you enter your program faster.
Unlike textbooks, or even typing teachers, Typing Tutor optimizes your memorization process.When you initialize Typing Tutor, it tests you to determine your dkill level. You are then given a choice of learning new keys or drilling for increased speed and accuracy.
The interactive nature of the personal computer means that immediately following each drill, Typing Tutor tabulates the results. You know your speed, accuracy percentage, number of mistakes, and even the keys you are having difficulty with.
TYPING TUTOR IS FOR EVERYONE
For the programmer. If you would like to enter programs faster and more

accurately Typing Tutor is the answer. Special attention is paid to the numbers and symbols that are most often used in programs. With Typing Tutor you can learn to program as fast you think!

For the student. There is no easier or faster way to learn typing. Improved typing skills lead to better reports and ultimately better grades. Also, Typing Tutor makes an excellent out-of-class practice aid for the student enrolled in a typing course.

For the youngster. Learning to type at an early age can lead to better language and writing skills. Since Typing Tutor is an individualized way of learning, typing skills can be learned at an early age. Typing Tutor can make learning fun!

For the "sometimes" typist. Sitting down and using Typing Tutor for 15 minutes before starting a letter can greatly improve your speed and accuracy. Since Typing Tutor determines your weaknesses instantly, "rusty" spots get cleaned up quickly.

THE SECRET OF TYPING TUTOR

If you have a computer, YOU should have Typing Tutor. Your computer is a natural teacher and Typing Tutor takes full advantage of its capabilities. The tools that you need for Typing Tutor, the typewriter style keyboard and CRT screen, are already available on your computer. The timing and memory abilities of your computer are ideal for measuring and recording speed and accuracy levels. Typing Tutor brings it all togehter.

Learning to type, after all, is a matter of drill. It is development of hand eye coordination and motor skills. The combination of repetitive motor skill development, low cost monitoring capability and unique computing power is what makes possible TRM™ and Typing Tutor.

Once you've tried Typing Tutor you'll wonder how people ever learned to type without it!!

TYPING TUTOR'S CREATORS

Typing Tutor was produced by the Image Producers, Inc., Chicagor, IL. Dick Ainsworth designed and developed Typing Tutor. Al Baker implemented Typing Tutor onto the TRS-80 and Apple II. The Image Producers bring unique creative talents in human communications, education and programming to the personal computer market.

According to Dick Ainsworth, Typing Tutor actually works by progrmming your mind and your fingers to type it. It is in effect a computer program that programs people. Time Response Monitoring(TRM™) was conceived of and developed by Dick Ainsworth. Typing Tutor is a unique and excellent application of TRM™.

SYSTEM REQUIREMENTS

Typing Tutor for the Apple requires 16K of memory and Apple BASIC.

EACH PACKAGE INCLUDES:

Cassette tape, manual and suggested lesson plans.

TITLE: TWO POPULATIONS
PUBLISHED BY: COMPRES
MEMORY: 32K, DOS, APPLESOFT ROM

Interactions between competing or predator prey populations using the Lotka-Volterra Equation.

PRICE: 50.00

TITLE: UNCLE SAM'S JIGSAW
PUBLISHED BY: MUSE
MEMORY: 32K
HARDWARE: APPLESOFT ROM OR APPLE II

An educational geography game featuring a detailed drawing of the United States. Each of the 48 continental United States must be recognized by its shape and location in a high resolution map of the U.S. The student gets two points for each state he names from shape alone, one point when recognition requires shape and location. Education in its most enjoyable form.
PRICE: TAPE, 12.95

TITLE: U.S. MAP
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

So you have problems remembering which state is which? Do you know the capitals? After a few games of U.S. Map, you should have no trouble. This advanced application of APPLE high resolution graphics enhances interest in the learning process. Options allow you to choose whether to identify only the state or both the state and its capital. As the run progresses, missed states or capitals are repeated several times.

TITLE: VERBAL SKILLS PAK
PUBLISHED BY: SLIWA ENTERPRISES

All three diskettes for just $44.95

TITLE: VITAFACTS
PUBLISHED BY: PERSONAL
MEMORY: 16K

Here are six health information programs for a healthier you. They present straight-forward, up-to-date medical facts in a way that is fun and effective. The VitaFacts Series has been approved by the Canadian College of Family Physicians.

LEARNING THAT IS FUN.

Because these programs are educational, don't think they are boring. You learn with the assistance of your computer. Each course consists of a booklet with diagrams and glossary, a computer cassette, and an audio cassette. You load the computer program first then play the audio cassette.

The audio portion uses a combination of dramatic vignettes and straight talk to tell the story. You'll easily identify with the characters in the various situations. And you'll gain a greater perspective as you her each drama.

From time to time, you will be asked to stop the audio tape and participate in a computer exercise to verify your new understanding. And you are told instantly after each question whether your answer is correct, or if not, what the correct answer should have been. You get a score after the computer exercise is complete. Because you use your new knowledge right away, you remember more. It's the best way to learn.

The VitaFacts Series will build a better understanding of you, your family and friends. It's the modern way to improve your health through personal computing.

GROWING UP (Adolescence).

Teenagers and parents. Often a difficult combination, and a difficult time. This VitaFacts program helps teenagers cope with adolescent life. It helps parents understand the changes in teenagers. And it helps the whole family gain

perspective and understanding, creating lines of better communication.
Teenagers learn about the physical and emotional changes taking place-powerful, often mysterious feelings. A thorough and straigh-forward discussion of the sexual effects of puberty is included, plus information on contraception and dealing with parents.
For parents, information is provided to help make adliscent changes easier for thei children. Discussions of parental over-protectiveness, inconsistencies, and responsibilities help parents maintain a balanced perspective.
TALKING ABOUT SEX.
It has been estimated tha sexual problems are causing marital difficulties in half the marriages in North America. And that 70% of these people can overcome their sex problems simply by getting correct information on sexual matters. But even for those who are not experiencing problems, there is always room for the improvement that comes with knowledg.
Talking About Sex is mainly a panel discussion with two of Canada's foremost sex couselors, Dr. William Chernenkoff and his wife and co-therapis, Carolyn Chernenkoff.
The path to satisfactory sex begins with knowledge and the appropriate attitude. This program will show you how to make knowledge and attitude work for you, not against you. Inhibitions are often simple misunderstandings, and your improved understanding of sexuality is here in this course. An excellent sec education tool for teenagers, too.
DRINKING AND DRUGS.
Lack of knowledge, especially among teenagers, combined with the easy availablity of drugs and liquor and the pressures of work, personal problems and peer groups, can explosively combine to produce a real drinking or drug problem. And it is a family problem affecting adults and teenagers.
For teenagers, the program's information aids in making better decisions. The cassette does not lecture or talk down. It provides the straight-forward facts about the threat of drugs and drinking pose to health and happiness.
For parents, this survey provides a greater understanding of a serious problem that every family may face.
BIRTH CONTROL.
Birth control information is important to teenagers, of course. And many adults and parents can still learn a thing or two as well.
This program explains the process of conception and birth thoroughly, beginning with puberty, and discusses all currently available techniques for prevention of unwanted pregnancies.
You will learn the effects of puberty on boys and girls. The role of the male and female in conception. The what and why of menstruation.
After you've mastered the birth basics, you move on to the preventive techniques. And, perhaps most important, popular fallacies are cleared up.
Too many unwanted pregnancies occur for lack of basic contraceptive information. VitaFacts has the information you need.
YOUR BLOOD PRESSURE(Hypertension).
High blood pressure has no obvious symptoms, but very high risks. High pressure is very common as people get older, or among people in high-pressure situations.
This VitaFacts program tells all about your heart and circulatory system. What blood pressure is, what is high, what is low, and what it all means to you. Causes and effects, diagnosis and treatment, risk factors and prevention are

discussed. The various roles of sleep, diet, and the increasing incidence of hypertension in women is presented.
No one is immune to high blood pressure, so knowledge and prevention are your best defenses.
HEART ATTACK.
This course describes just what a heart attack is, and how to recognize one. The right knowledge and action when someone is experiencing a heart attack can literally mean the difference between life and death, and that knowledge is present clearly. From treating an attack, to the coronary care unit, to preventing a second attack-it's all here.
Even more important are the steps to prevent heart attack. The main causes-including the role of cholesterol-are discussed in detail. The roles of proper diet and exercise and the hazards of smoking are explained. This is a powerful course, and you will be glad you took it.
PRICE: 19.95

TITLE: VOCABULARY BUILDER
PUBLISHED BY: PROGRAM DESIGN

Provides practice in synonym and antonym questions. Junior high up. 22 programs on 2 cassettes and guide.
PRICE: 14.00

TITLE: VOCABULARY BUILDER I BEGINNING
PUBLISHED BY: PROGRAM DESIGN

11 programs include a set of graded vocabulary questions on synonyms and antonyms (the most common type of vocabulary question on an IQ test). The last lesson is a test on vocabulary. Toatl of 400 questions, 2000 words in course.
PRICE: 15.00

TITLE: VOCABULARY BUILDER 2 ADVANCED
PUBLISHED BY: PROGRAM DESIGN
11 programs like those in Vocabulary I, but using a more advanced word list.
PRICE: 15.00

TITLE: VOCABULARY BUILDER
PUBLISHED BY: SLIWA ENTERPRISES
Over 1600 entries with option of matching synonyms or antonyms.
PRICE: $19.95

TITLE: WHAT'S THE SCORE?
PUBLISHED BY: MICRO POWER & LIGHT CO.

Introduces statistical measures, distributions, histograms and curves. Colorful examples. Designed for advanced elementary through high school age students.
PRICE: $29.95

WORD FUN — THE DEFINITION GAME
PUBLISHED BY: COMPUTER STATIONS, INC.

Word Fun is an easy-to-use-and-edit word definition game. The versatility of this package lends itself for use from elementary through college level. Word fun can be used at home as a study aid or for just plain fun. Supplied on diskette, uses Applesoft (great for you Plus owners).
PRICE: $19.95

TITLE: WINDFALL, The Oil Crisis Game
PUBLISHED BY: EDU-WARE
MEMORY: 32K

Have high energy prices and short supplies left you more time around your computer? Windfall will fill those empty hours (though not, unfortunately, your gas tank), and alleviate frustrations as your brain tangles with energy markets. As the Cheif Executive of Engulf Oil you join the other side of the petro world, attempting to tunr crisis into cahs. Screen displays show both graphically and numerically the results of your manipulations, as a helpless public lines up at your stations.

PRICE: CASSETTE, 14.95
DISKETTE, 19.95

TITLE: WORD SKILLS 1: PREFIXES
PUBLISHED BY: PROGRAM DESIGN
MEMORY: 16K

Lively instruction in some common prefixes to help improve vocabulary, reading and spelling skills. Students learn the meanings of a group of prefixes, practice putting the correct prefix beofre words, and also deduce the meaning of new words by analyzing the prefix and root. 5 programs.

PRICE: DISK or TAPE, 14.95

TITLE: WORD SKILLS/NOUNS
WORD SKILLS/WORD MEANINGS
PUBLISHED BY: PROGRAM DESIGN

Program Design announces four titles to help students with vocabulary and reading skills. Word Skills 2 and Word Skills 3 cover common prefixes and suffixes. Word Meanings teaches synonyms, homonyms, antonyms and troublesome words. Nouns covers common and proper nouns on a high school level. The programs are available on cassette for Apple and PET.

PRICE: $14.95

TITLE: WATER THE FLOWERS
PUBLISHED BY: PROGRESS

Math program covering addition, subtraction, multiplication and division on grade levels 1 through 6.

PRICE: DISK, 19.95

EDUCATION SECTION 2

Acid-Base Chemistry 2E-1
Apple Flash™ 2E-1
Atomic Structure 2E-1
Biology Series 2E-1
Basic Math Competency Skill Drills 2E-1
Chelsea Science Simulation Series for Chemistry 2E-1
Chelsea Science Simulation Series for Biology 2E-3
Classroom Computer Package #1 ..... 2E-6
Chemistry with a Computer 2E-6
Chemical Equilibrium 2E-6
Educational Programs 2E-6
Educational Programs 2E-7
Fundamental Skills for General Chemistry 2E-8
Flash Disc™ 2E-8
Ghostwriter™ 2E-8
Group Velocity 2E-8
Humanities 2E-8
Individual Study Center 2E-8
Micro-Computer Educational Programs 2E-8
Math Series 2E-9
Missing Math Facts 2E-9
Mind-Step 1 ..... 2E-9
Mind-Step 2 ..... 2E-9
The Patient Professor™ 2E-9
Reader™ 2E-9
Stories™ 2E-10
Study Quiz Files 2E-10
Tribbles 2E-10
Biology Software/etc. 2E-10
Computer Programs for Deaf Students 2E-10
Grow 2E-10
Improving Memory Skills 2E-10
Physics 2E-11
Planning Cash Flow 2E-11
Reading/Education 2E-12
Spanish 2E-12
Basic Tutor Series 2E-12

TITLE: ACID-BASE CHEMISTRY
PUBLISHED BY: PROGRAMS FOR LEARNING, INC.

11 programs with instructor's guide. Cassette or Disk.
PRICE: $100.00

TITLE: APPLE FLASH™
PUBLISHED BY: OMNICO

PERCEPTUAL accuracy can be practiced and tested with an infinite variety of speeds and combinations of letters, numbers, shapes, and symbols, Records students progress on disk and allows teachers to set prescriptions prior to class.
PRICE: $110

TITLE: ATOMIC STRUCTURE
PUBLISHED BY: PROGRAMS FOR LEARNING, INC.

9 Programs with instructor's guide. Cassette or Disk.
PRICE: $100.00

TITLE: BIOLOGY SERIES
PUBLISHED BY: TYC SOFTWARE

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TITLE: CHELSEA SCIENCE SIMULATION SERIES FOR CHEMISTRY
PUBLISHED BY: CONDUIT

RKINET — Reaction Kinetics
The laboratory can be used for a few experiments in reaction kinetics, but some especially interesting reactions often have to be omitted for reasons of time or complexity. This simulation, or model, has been written with the aim of fulfilling two basic objectives: (1) to extend students' laboratory experience and understanding of reaction kinetics by enabling them to carry out a wider range of investigations without taking up an excessive amount of time; and (2) to help students understand the relationship between a mathematical model and reality.
This unit makes use of a computer program in which a series of mathematical equations (a mathematical model) represents the ways in which various factors influence the rate of a chemical reaction. The simulation model, which is based on data from real experiments, will broaden the students' knowledge of first- and second-order reactions, rate constants, concentration, and the effect of variation of temperature on reaction rate.
The student first carries out a simple exercise in mathematical modeling, comparing computer-derived results with his or her own experimental ones. The stu-

dent then uses models, stored in the computer program, to simulate other experiments, choosing suitable values for parameters which represent experimental conditions. This gives the student valuable experience in designing such experiments and a practical knowledge of characteristics of chemical systems which might not be obtained in any other way.
The use of the simulation also provides experience in selecting investigations which produce meaningful results. However, it is not intended in any way to replace existing laboratory experiments, but rather to complement and extend the students' work.
The package from CONDUIT includes six copies of the *Students' Notes,* one copy of the *Teachers' Guide,* and the software in machine-readable form (one interactive BASIC program, 245 lines of code, written in CONDUIT *Level 0* BASIC).

HABER — Ammonia Synthesis
The production of ammonia by the Haber process is an important process in chemical industry, and yet one not easily performed by students in conventional laboratory investigation. The *Haber* computer simulation provides students with the opportunity to study the Haber process and how the various conditions (temperature, pressure, catalyst and reactant concentration ratios) influence the course of the reaction (i.e., the time required to reach equilibrium yield of ammonia). Specifically, the authors state that the objectives of the unit are to enhance students' understanding of:
(1) The Haber process.
(2) The effects on the equilibrium yield of ammonia of changing temperature, pressure, and the initial hydrogen-to-nitrogen molar ratio.
(3) The effects on the reaction rate of changing temperature and pressure.
(4) The effects on the reaction rate using various catalysts.
(5) Some of the considerations outside chemistry which have to be taken into ac count in the design of chemical plants for the industrial production of ammonia.
(6) The interpretation of results predicted in a model for conditions which the students are unable to create in the laboratory.
(7) The use of a mathematical model.
Even though the computer simulation is interactive, it does not stand alone. The *Students' Notes* provide the essential framework and direction for the students' studies. The *Notes* provides a brief restatement of the equilibrium law, Le Chatelier's Principle of Equilibrium, the rate law of kinetics, the ammonia synthesis mechanism, the effect of temperature on the rate constant, and the effects of catalysts. Before using this unit, students should be introduced to these concepts through lectures and textbook readings. Armed with this knowledge, students can use the *Haber* simulation to investigate the properties of a system at equilibrium (Investigation #1) and to investigate the kinetics of the Haber process (Investigation #2).
In Investigation #1 the student specifies the constant molar ratio, the initial temperature, the increase in temperature, and the constant pressure, and selects to vary the pressure, temperature, or initial hydrogen-to-nitrogen ratio. The computer program then calculates and displays the percentage yield of ammonia against the varying parameters for the conditions chosen by the student.
In Investigation #2 the student specifies which catalyst to use (none, osmium, tungsten, molybdenum, iron, or manganese dioxide) and then chooses a temperature and pressure for the investigation. At time intervals set by the student, the simulation calculates the amount of ammonia formed, expressed as a percentage of ammonia in the equilibrium mixture.
Each investigation is followed by questions to bring out the important points of the chemistry.
The package from CONDUIT includes six copies of the *Students' Notes,* one copy of the *Teachers' Guide,* and the software in machine-readable form (one interactive BASIC program, 308 lines of code, written in CONDUIT *Leval 0* BASIC).

TITLE: CHELSEA SCIENCE SIMULATION SERIES FOR BIOLOGY
PUBLISHED BY: CONDUIT

COEXIST — Population Dynamics
Population dynamics is the study of the changes which occur in the size of populations over periods of time and the factors which influence these changes: it is not a topic which can easily be taught experimentally since it entails the maintenance of large numbers of organisms over many generations and is subject to the complex and not always apparent interaction of environmental and other influences. *Coexist* is an attempt to overcome these problems by providing students with the facility to simulate two biological situations. In the first, up to three populations are modeled to grow independently on identical limited food resources. The student is able to investigate the situation in which organisms compete only with members of their own species. When the outcome of competition by systematically choosing values for the numbers of offspring, generation times, initial and saturation problems, and inhibiting factors. By controlling these factors, students should learn something of their influence on population growth and of the need to set up controls and to vary only one parameter at a time in investigating relatively complex biological situations.
The package from CONDUIT includes six copies of the *Students' Notes,* one copy of the *Teachers' Guide,* and the software in machine-readable form (one interactive BASIC program, 315 lines of code, written in CONDUIT *Level 0* BASIC).

COMPETE — Plant Competition
The study of interactions between flowering plants is an important aspect of ecology, and a considerable amount of experimental work has been carried out in recent years to investigate the factors that are involved. However, experimental work with real plants often takes a long time, and such projects are not always suitable for student use. The computer simulation of plant growth presented in *Compete* enables students to plan an investigation and carry it out without the long delay usually associated with growth experiments. The *Students' Notes* describe investigations with both real and simulated plants, together with other data in the form of graphs, tables and descriptions. The real experiments need to be set up well in advance of the time when the results are required, but the others can be carried out in one or two hours. No prior knowledge about plant competition is assumed, but it is desirable that students have a general background knowledge of the development of flowering plants and of the resources which plants must obtain from their environment. The seven investigations presented in the *Students' Notes* are summarized below.
Effects of Crowding on Plant Growth (real experiment). This section contains an introductory experiment designed to show that plants do affect one another's growth when they are crowded together. It also provides an opportunity to see the actual pattern of growth of plants which are dealt with in later sections of the *Students' Notes.* The experiment needs to be set up about two weeks before the results are required.
Measurement of Growth (second-hand data). This section introduces the student to the quantitative measurements of growth which are used in most of the remaining investigations. The measurements show that the pattern of growth which is obtained depends upon how growth is measure.
Simulated Growth in a Monoculture (computer simulation). The monoculture experiments are introductory ones which familiarize students with the use of a computer to simulate plant growth. They also provide control data for comparison with the simulated growth of mixtures of different kinds of plants in a later investigation. The simulation is based on a mathematical model devised by Baeumer and DeWit.
Interaction Between Clover Varieties (real experiment and second-hand data).

The real experiment in this section is based on one by the Nuffield Advanced Biological Science Project, and takes about two months to obtain results. The investigation of Black is also described and provides a complimentary set of data using a different species of clover. His measurements introduce the idea of a correlation between success in a mixture and the leaf area of the variety, suggesting that light is an important resource in limited supply. This idea is developed in the following section.

Simulated Growth in a Mixture (computer simulation). Baeumer and DeWit found that there was little or no interaction below the surface of the soil. They concluded that the light intensity was the main factor affecting competition and that the amount of light a plant received was largely determined by its height. This section gives students an opportunity to plan an investigation to study the interaction of any two of four kinds of plants (barley, oats, tall peas, dwarf peas) at different planting densities.

Interaction Below the Ground (second-hand data). In this section, the work of Stem and Donald on the interaction of subterranean clover and rye-grass is presented to show the student how conditions in the soil can affect the balance between two species.

Direct Plant Interaction second-hand data). The investigation described in this section is a reminder that competition for limited resources is not the only way in which plants interact. Many plants produce chemical substances which affect plants of other species nearby.

The package from CONDUIT includes six copies of the *Students' Notes,* one copyof the *Teachers' Guide,* and the software in machine-readable form (one interactive BASIC program, 237 lines of code, written in CONDUIT *Level 0* BASIC).

ENZKIN — Enzyme Kinetics

A piece of experimental research requires at least three kinds of work: planning of the experiments, performance of the experiments, and interpretation of the results. Only the middle stage involves laboratory work, and it is on this stage that traditional biochemical teaching concentrates. Of course, performing experiments is important, but there is a danger that planning and interpretation may be neglected as time and resources do not permit enough laboratory work to support them.

Interpretation can be practiced with data and instructions from books, but practice in planning cannot be undertaken without the performance of many experiments. This unit permits students to obtain realistic results very rapidly, using a computer program to simulate the enzyme-catalyzed reactions. Thus, *Enzkin* allows many cycles of planning, experimentation, and interpretation over a short period of time. The educational objectives of this unit are listed below.

1) To enable students to answer for themselves some of the fundamental questions of enzyme kinetics.

2) To give students experience in dealing with an initially unknown system.

3) To provide experience in the plotting of graphs and in other forms of data interpretation. The results from the investigations they have planned seem more real than tables of data from a book, and the need to use the results in planning the next investigation encourages students to extract the meaning quickly.

4) To introduce students to some more complex situations in enzyme kinetics, such as substrate inhibition, co-operativity, and the influence of a cofactor, by using a modified version of the program.

The introduction to the *Students' Notes* describes some of the features of enzyme-catalyzed reactions. In later sections the students are asked to plot progress curves and to calculate initial velocities of reactions. Six enzymes with different properties are simulated by the computer program so that each student, or group of students, can obtain different results. Some of the enzymes may not correspond to any real phosphatase, but the principles of investigation are the same. The enzymes differ in the following six properties: Michaelis constant, K;

half the maximum velocity of reaciton per ml at 30 °C; Optimum pH; pH range on either side of the optimum, above or below which activity falls to zero; increase in denaturation rate per 1 °C rise in temperature; and temperature at which the enzyme is denatured by 0.1% per minute. These enzymes can easily be replaced by ones with different values by changing some of the data statements in the computer program.
The package from CONDUIT includes six copies of the *Students' Notes,* one copy of the *Teachers' Guide,* and the software in machine-readable form (one interactive BASIC program, 292 lines of code, written in CONDUIT *Level 0* BASIC).

EVOLUT — Evolution and Natural Selection
Given the complex genetic make-ups of higher organisms controlling the range of external and internal characteristics, natural selection becomes difficult to teach by traditional methods. The subject is further complicated since not all genes produce a single characteristic. In order to study the effect of natural selection on one gene (or set of alleles), the situation can be simplified by setting up a model of a wild population, in this case, the well-known Pea Model. Unfortunately, the process of counting colored peas is too tedious, time-consuming, and error-prone to enable investigations to be carried into more than one or two generations. A far quicker means of obtaining results, without error, by the same process is by using a computer program. Set within a complete teaching package, *Evolut* is the Pea Model programmed for the computer. Students can vary the type of selection (against one homozygote, both homozygotes, the heterozygotes), the degree of selection, and the size and composition of the intial population, and then follow the course of natural selection for as many generations as desired.
The students' appreciation of the action of natural selection is enhanced by the realization that relatively small differential survival rates are sufficient, over a number of generations, to alter the balance of a population. It will be appreciated that differential survival occurs, some forms surviving in preference to others. An elementary knowledge of genetics is assumed, particularly an understanding of (a) alleles, dominance and recessiveness, homozygotes and heterozygotes, (b) ecological habitats, and (c) percentages.
The package from CONDUIT includes six copies of the *Students' Notes,* one copy of the *Teachers' Guide,* and the software in machine-readable form (one interactive BASIC Program, 243 lines of code, written in CONDUIT *Level 0* BASIC).

LINKOVER — Genetic Mapping
Genetics is a part of biology in which it is sometimes difficult to arrange adequate practical work. Genetic mapping, for example, involves the breeding of large numbers of organisms which puts the practical teaching of this topic beyond the resources of most biology departments. But the understanding of genetic mapping can only be assured if the student can construct a map from breeding data. Breeding experiments themselves entail too much time and the maintenance of too many organisms for more than a trivial amount of data to be collected. On the other hand, data derived from the literature is deterministic and involves the student to only a small extent.
These problems can be overcome by simulating mapping experiments on a computer. *Linkover* has been designed to allow students to plan and execute a program of experiments so that an accurate genetic map of the single chromosome of the "electronic" species can be drawn. The student's investigation is a two-stage process: (1) selection of gene combinations either alphabetically or otherwise until the sequence of genes in the linkage group has been established; and (2) selection of adjacent genes so that the distances separating the genes can be accurately calculated. The student specifies a series of genetic crosses and from the resulting data builds up a linkage map for ten genes of a hypothetical

diploid species using the three-point testcross technique. An important part of this simulation is the challenge it affords students in planning the genetic crosses themselves.
Students should have an understanding of the principles of Mendalian inheritance and should be introduced to the theory of linkage and genetic mapping before using this unit. Linkage and genetic mapping are explained in the *Students' Notes;* also included are seven exercises leading to the use of the computer simulation.
The package from CONDUIT includes six copies of the *Students' Notes,* one copy of the *Teachers' Guide,* and the software in machine-readable form (one interactive BASIC program, 422 lines of code, written in CONDUIT *Level 0* BASIC).

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ENGLISH GRAMMAR — GRADE 8
ENGLISH GRAMMAR — GRADE 9
ENGLISH GRAMMAR — GRADE 10
ENGLISH GRAMMAR — GRADE 11
ENGLISH GRAMMAR — GRADE 12
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ENGLISH — WORKING WITH ADJECTIVES
ENGLISH — WORKING WITH ADVERBS
ENGLISH — WORKING WITH CONTRACTIONS & HOMONYMS
ENGLISH — WORKING WITH SUBJECT & NOUNS
ENGLISH — WORKING WITH PRONOUNS & PREPOSITIONS
ENGLISH — WORKING WITH VERBS
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SPANISH II
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STUDY INPUT — Examples of the use and function of INPUT command.
STUDY LAYOUT — An introduction to program flow and "how to write" a program.
STUDY HELP — Some common questions are answered concerning control and progamming ideas.

BASIC TUTOR II — Continuation of TUTOR I, with the introduction of graphics commands in low and high resolutions graphics modes.

PROGRAMMING COMMANDS SET TWO — More programming commands and their uses.
TUTOR IN GRAPHICS — Introduction to graphics commands and uses.
STUDY PLOTS — Examples of x - y plots and some useful plot routines in graphics.
STUDY GOSUB — The GOSUB/RETURN commands are used in examples.
STUDY ORBITS — A brief study of circular plots in high resolution graphics.
STUDY BOUNCE — An example of bouncing a ball in a game simulation.
STUDY FUNCTIONS — A "listing" of "wired-in" functions.

BASIC TUTOR III — Introduction to the study of "text files", and the basis for most "data processing" of strings and words.

TEXT FILES — The main program on this disk introduces techniques, use of sequential text files.
STUDY READ — Reading a text file from the disk.
STUDY WRITE — Writing to a text file onto a disk.
STUDY APPEND — Example of APPENDING a text file.
STUDY ASCII — Shows the use of key codes in programming your computer.
STUDY HELP — Answers some of the common questions re text files and disk storage of text.

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PLAYBACK MUSIC — A brief study in the use of text files to play back saved musical compositions.

MUSINDEX — An index of saved compositions.

TFILES of the music you have composed in Music study or KEYBOARD MUSIC.

Two BINARY programs that aid in these music study programs.

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TRAIN — A low resolution graphics program showing animation of a train.

BOB'S FLOWER — A high resolution graphics study of a flower.

SHAPES — Introduction to creation of shapes for your graphics.

TABLES — One method of creating and printing tables of data.

GAS ECONOMY — A simple problem in car gas economy; allows study of one kind of algorithm.

SORT — A simple sort routine, a good study to start a complex problem in programming.

DEMO of RANDOM — A routine that uses a random number generator to create "games".

BASIC TUTOR VI — Studies in the intermediate level of programming in BASIC. This disk is intended for your use and study of more "tricks".

PRIMES — Example of an algorithm that creates prime numbers.

FIND CONTROL — How to find hidden control characters in a program.

CONCATENATION — The power of putting things together.

MID/RIGHT — How to find parts of string and numeric variables.

PROGRAM LENGTH — An example of program length determination.

AUDIO/VIDEO — Demonstrating a use of sounds and graphics.

BINADR — An example of a way to find the binary address of a "bsaved" program.

BLOAD PIC — A demonstration of a way you can bring forth a picture from a computer's "picture" library with ease.

PICTURE — Sample of a "picture" that you might wish to save for later viewing. This PICTURE is shown by the BLOAD PIC program.

BASIC TUTOR VII — More "utility" programs for the use and study of methods.

POKE SHAPES — How to poke shapes into memory.

DAY OF DATES — What day of the week is Oct. 28, 1984?

SHLOAD — Example of a program to put shape tables into memory.

POINTERS — Where are the Applesoft pointers; to what addresses do they point?

READ TFILE — A better example of reading text files.

WRITE TFILE — An improved method of writing a text file.

DISK MAP — A graphic display of the current contents of a disk.

MACHINE LANGUAGE DRILL — Contains advanced machine language "poke" "peek" and "call" information.

The student of these Basic Tutor studies is encouraged to learn by experimentation and practice.

ASTRONOMY I — Introduction to the study of stars and constellations. High resolution graphics is used to show the constellations you can find in the heavens. The first disk in this series includes:

BIG DIPPER — We use the BIG DIPPER to introduce the constellations and their stars. The LITTLE DIPPER is also shown and studied briefly.

ORION — The constellation is shown and some of its major stars are discussed.

STAR INFORMATION — Some of the properties and features of stars are introduced for study.

RIGHT ASCENSION — The measurement and location of stars and constellations are introduced in our discussion of the celestial coordinate, right ascension.

DECLINATION — Declination of stars and constellations is discussed, and the twelve Zodiac constellations are shown on the celestial equator. The apparent motion of the sun among the stars is discussed and shown.

ASTRONOMY II — A continuation of ASTRONOMY I; includes the viewing of the major constellations with major features shown.

STARS I — Introduces a brief study of the constellations of:
Ursa Major and Ursa Minor Cassiopeia and Cepheus Orion.

CONSTELLATIONS I — Constellations here studied include:
Andromeda, Auriga, Hercules, Cetus, Sagittarius, Pegasus, Perseus, Pisces.

NIGHTLY PROGRESSION — A brief study in the apparent westward progression of the constellations during the night as seen from the earth.

CONSTELLATIONS II — This program has studies of constellations:
Aquarius, Aquila, Gemini, Taurus, Leo, Libra, Ophiuchus, Canis Major.

QUIZ — A review of our studies of stars and constellations in ASTRONOMY I and ASTRONOMY II.

PHYSICS I — A series of program studies in introductory mechanics. Includes:

ARROWS — Educational game of shooting arrows at a target, with study inputs of angle and speed of arrow. In high resolution graphics.

THROW — The trajectory of a ball thrown vertically up is the basis of a study of free-fall position, velocity and time.

RESTITUTION — The bounce of a ball is used as a basis of study in coefficient of restitution.

RELATIVITY — Introduction to relativistic changes with increased speed.

STOPWATCH — A real-time stopwatch for class use. You can calibrate it if necessary.

CALCULATOR — Converts your APPLE into a specialized physics calculator.

LOGS 10 — Converts numbers to log base 10, and back again.

MOMENTUM — A graphic study of two-body momentum analysis.

POPULATION — Projections of world and United States populations based upon various growth rates that the student enters. This disk also includes a "game" program in LIFE for the analysis of stable vs. unstable populations. There are two other brief programs included, BIRTHDAY, and a Binary program for study.

NUMBER RACE — This disk contains the following programs created by students:

NUMBER RACE — An educational game that introduces some logic.

TOM'S LISSAJOUSE — A high-resolution graphics lissajouse plot produced from various student inputs.

TOM'S PIPELINE — Demonstration of an algorithm used in an optimumization problem.

NUMBER RACE INSTRUCTIONS — Instructions for number race.

CLASS RECORDBOOK — A program for keeping class records of attendance, homework and evaluations. This is for the teacher's use.

INVENTORY — A major program for a small business/school inventory control. A printer is needed.

ACCOUNTS — Accounts receivable/payable, and general ledger, payroll etc. are included in this documented work. A printer is needed.

CONVERSIONS — This disk contains two useful programs:

CONVERSIONS — Converts English to Metric and/or back for all units of time, length, mass/weight, volume, area, energy, force, speeds, etc.

CALCULATOR — This program turns your computer into an extended calculator for math, physics, astronomy, chemistry.

ENGINEERING

Active Filter Design EN-1
Audio Engineer EN-1
Beams EN-1
Bolt Circle EN-1
Chip EN-2
Curve Fitter EN-2
Data Smoother EN-2
Electrical Engineering II EN-2
Electronic Design for the Apple EN-3
Engineering Mathematics-1 ..... EN-5
Fourier Analyzer EN-5
MCAP: A Microcomputer Circuit Analysis Program EN-5
Microcomputer Aided Design of Active Filters EN-5
Microcomputer Circuit Analysis Program EN-5
Regression 1 ..... EN-6
Scientific Plotter EN-6
Scientist EN-6
Spur Gears EN-6
TFA (Transfer Function Analyzer) EN-6
Trig/Circle Tangent EN-7
Uni-Solve EN-7



TITLE: ACTIVE FILTER DESIGN
PUBLISHED BY: POWERSOFT

The Active Filter Design program is written to go beyond the normally thought of "Active Filter Design Cookbook Approach". In a reasonable filter design book, one can find full design equations to specify, given a set of requirements, the required resistor and capacitor values to achieve those requirements. This approach fails to allow for the following:
Standard components may not be available in the computed values.
Real components have a tolerance and are subject to aging, thermal variations and environmental influence.
In use circuits may have been modified to specifically deviate from therortical value performance.
This program attempts to address these areas by allowing the designer maximum flexibility in determining actual design performance under a variety of adverse conditions.
The program as written addresses conventional filter design as follows:
Multiple feedback Low Pass Filter
Multiple feedback High Pass Filter
Multiple feedback Band Pass Filter
Controlled Source Low Pass Filter
Controlled Source High Pass Filter
Controlled Source Band Pass Filter
I.N.I.C. Low Pass Filter
I.N.I.C. High Pass Filter
I.N.I.C. Band Pass Filter
In the program the plot of frequency vs. amplitude and frequency vs. phase angle is also presented in high resolution graphics to permit a comparative analysis.
PRICE: TAPE, 14.95
DISK, 19.95

TITLE: AUDIO ENGINEER
PUBLISHED BY: PROGRAMMA
MEMORY: 48K, APPLESOFT ROM or RAM
This program is great for all engineers. It draws the AUDIO CIRCUITS in HIRES and solves for unknowns.
PRICE: DISK, 29.95

TITLE: BEAMS
PUBLISHED BY: COMPUTER HOUSE DIV.
This Program calculates the stress and deflection on any beam if given the beam dimensions, length, support conditions and load conditions. Also it can compute the correct American standard I beam if given the length, support and load conditions and maximum allowable deflection.
PRICE: $115.00

TITLE: BOLT CIRCLE
PUBLISHED BY: COMPUTER HOUSE DIV.
This program calculates X and Y coordinates (to 5 decimal places) for any number of equally spaced points on a given diameter.
PRICE: $25.00

TITLE: CHIP
PUBLISHED BY: LAMAR INSTRUMENTS

A new program for the APPLE II computer that will be a boon to all engineers, technicians and hobbyists that work with integrated circuits. Tired of searching through manual after manual looking for the pinout on that obscure chip that you are about to use in that trick circuit you have in mind? Forgot the truth table on an exclusive nor gate? Well then "Chips is just the program for you! Written out of necessity by Paul Lamar, owner of Lamar Instruments, "Chips" contains pinouts and truth tables, where applicable, for over 100 TTL and CMOS integrated circuits. Any one of these pinouts and truth tables is displayed on the cathode ray tube in less than three seconds after hitting return. "Chips" is able to do this amazing feat by utilizing the high speed 6502 machine language search routines built into the APPLE II disk operating system. In a commercial environment the "Chips" program pays for itself in several weeks. New pinouts and truth tables are easily added to the existing list using examples provided in the program. "Chips" is available on floppy disc for the APPLE II or the APPLE II PLUS directly from them.

TITLE: CURVE FITTER
PUBLISHED BY: INTERACTIVE MICROWARE, INC.

Selects the most appropriate curve to fit your experimental results. Available methods include scaling and transformations, averaging, smoothing, interpolation and interpolation of unknown values for the fitted curve. Requires a 48K Apple II
PRICE: $35

TITLE: DATA SMOOTHER
PUBLISHED BY: DYNACOMP, INC.

This special data smoothing program may be used to rapidly derive useful information from noisy business and engineering data which are equaly spaced. The software features choice in degree and range of fit, as well as smoothed first and second derivative calculation. Also included is automatic plotting of the input data and smoothed results.
PRICE: $14.95, Cassette $18.95, Diskette

TITLE: ELECTRICAL ENGINEERING II
PUBLISHED BY: POWERSOFT
MEMORY: 16K, APPLESOFT

Electrical Engineering II is the second in a series of Electrical Engineering packages designed to cover the broad spectrum of EE with handy general purpose sub-programs with higher than normal usage levels. The programs in this package are:
1) Reactance Chart
2) Series Resonant Circuits
3) Parallel Resonant Circuits
4) Computing the Impedence of a Ladder Network
5) T-Attenuator Networks
6) PI-Attenuator Networks
7) Wye-Delta/Delta-Wye Transformations
8) Minimum Loss Pad Matching
9) PI Network Impedence Matching
10) Passive Band Pass Filter Design
11) Passive Butterworth Low Pass Filter Design
12) Active Filter Low Pass Design
13) Active Filter High Pass Design
PRICE: $14.95

TITLE: ELECTRONIC DESIGN FOR THE APPLE
PUBLISHED BY: KORSMEYER

It's been a long time coming, but it's finally here! Free yourself from the tedious and time consuming calculator calculations involved with the design of electronic circuits. The following are a list of the calculations supported in the package.

OHM'S Law Formulas (find any variable)
DC Power Formulas (find any variable)
Kirchhoff's Voltage Law
Kirchhoff's Current Law
Total Resistance (up to 10 resistors)
Total Capacitance (up to 10 capacitors)
Charge Stored in a Capacitor
Energy Stored in a Capacitor
For Voltage Across Series Capacitors
Total Inductance (up to 10 inductors)
Voltage Regulation

Capacitive Reactance
Inductive Reactance
Impedance and Phase Angle for Resistance & Inductance in Series
Impedance and Phase Angle for Resistance & Capacitance in Series
Impedance and Phase Angle for Inductance & Capacitance in Series
Impedance and Phase Angle for Resistance & Inductance in Parallel
Impedance and Phase Angle for Resistance & Capacitance in Parallel
Impedance and Phase Angle for Resistance, Inductance, & Capacitance in Series
Impedance and Phase Angle for Inductance & Capacitance in Parallel
Impedance and Phase Angle for Resistance, Inductance & Capacitance in Parallel
Impedance and Phase Angle for Inductance & Series Resistance in Parallel with Resistance
Impedance and Phase Angle for Inductance & Series Resistance in Parallel with Capacitance
Impedance and Phase Angle for Capacitance & Series Resistance in Parallel with Inductance & Series Resistance

Mutual Inductance
Coupled Inductance of Inductance in Parallel (with Fields Aiding)
Coupled Inductance of Inductance in Parallel (with Fields Opposing)
Coupled Inductance of Inductance in Series (with Fields Aiding)
Coupled Inductance of Inductance in Series (with Fields Opposing)
Coupling Coefficient for 2 Inductively Coupled Coils
Energy Stored in an Inductor
Q of a Coil where Resistance & Inductance are in Series
Q of a Capacitor where Resistance & Capacitance are in Series
Q of a Capacitor where Resistance & Capacitance are in Parallel
Resonance
Admittance of a Series Circuit
Susceptance of a Series Circuit
Power Factor
Average, RMS, Peak, & Peak-Peak Conversions
Time Constants (on charge or discharge)
Transformer Formulas

Constant - K Lowpass T - Section Filter
Constant - K Lowpass L - Section Filter
Constant - K Lowpass PI - Section Filter

Constant - K Highpass T - Section Filter
Constant - K Highpass L - Section Filter
Constant - K Highpass PI - Section Filter
Constant - K Bandpass Filter
Constant - K Bandreject Filter
Series M - Derived Lowpass T - Section Filter
Series M - Derived Lowpass L - Section Filter
Series M - Derived Lowpass PI - Section Filter
Series M - Derived Highpass T - Section Filter
Series M - Derived Highpass L - Section Filter
Series M - Derived Highpass PI - Section Filter
Shunt M - Derived Lowpass T - Section Filter
Shunt M - Derived Lowpass L - Section Filter
Shunt M - Derived Lowpass PI - Section Filter
Shunt M - Derived Highpass T - Section Filter
Shunt M - Derived Highpass L - Section Filter
Shunt M - Derived Highpass PI - Section Filter

(VACUUM TUBE FORMULAS)
Admplification Factor
AC (Dynamic) Plate Resistance
Mutual Conductance (Transconductance)
Gain of an Amplifier Stage

(TRANSISTOR FORMULAS)
Input Resistance
Current Gain
Voltage Gain
Output Resistance
Power Gain
Alpha (Current Gain of the Common-Base Configuration)
Beta (Current Gain of the Common-Emitter Configuration)
To find (Alpha) with Beta given, or to find (Beta) with Alpha given

Impedance of a Coaxial Line
Attenuation of a Coaxial Line
Impedance of a Parallel Conductor
Percent of Amplitude Modulation
Side Band Power of an A-M Carrier
Total Radiated Power
Percent of Modulation in an F-M Carrier
Modulation Index of an F-M Carrier
Number of Decibels corresponding to a given power ratio
Number of Decibels corresponding to a given voltage or current when the impedances across which the signals are being measured are equal.
Number of Decibels corresponding to a given voltage or current when the impedances across which the signals are being measured are unequal.

APPLESOFT IN ROM AND 48K RAM REQUIRED. High-Resolution graphics representations of all the filter circuits are shown.
PRICE: $99.95 KED100D Diskette

TITLE: ENGINEERING MATHEMATICS -1
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Gilder) Contains 8 programs useful to the engineer. #01303, TRS-80 Level II; #01304, Apple II.
PRICE: $14.95

TITLE: FOURIER ANALYZER
PUBLISHED BY: DYNACOMP, INC.

Use this program to examine the frequency spectra of limited duration signals. The program features automatic scaling and plotting of the input data and results. Practical applications include the analysis of complicated patterns in such fields as electronics, communications and business.
PRICE: $14.95, Cassette $18.95, Diskette

TITLE: MCAP: A Microcomputer Circuit Analysis Program
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

Performs a linear voltage, impedance or transfer impedance analysis of an electronic circuit. Calculates, lists, plots the circuits frequency response, and analyzes circuits with up to 15 nodes. Larger circuits can be analyzed individually. Apple II.
PRICE: $24.95

TITLE: MICROCOMPUTER AIDED DESIGN OF ACTIVE FILTERS
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Gilder) Eight programs that simplify the design of active filters and will calculate the component values needed for various bandpass, low-pass, and notch-type filters. 01401, PET: 01403, TRS-80 Level II; 01404, Apple II; 01407, Heath
PRICE: $16.95, each tape

TITLE: MICROCOMPUTER CIRCUIT ANALYSIS PROGRAM
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Savon) Minimize your time calculating the frequency response of a circuit with this new progam. MCAP performs a linear voltage, impedence, or transfer impedence analysis of an electronic circuit. Enter the circuit description in a

systematic nodal notation and the program then calculates, lists and plots the circuit's frequency response. MCAP readily analyzes circuits with up to 15 nodes — larger circuits can be divided into subsections for individual analysis. And, the circuits analyzed can contain any or all of the six types of components: resistors, capacitors, inductors, bi-polar transistors, FETs, and Op-Amps. Educators in particular will find this a strong applications program for circuit analysis.
PRICE: $24.95, #04504, Aple II;

TITLE: REGRESSION 1
PUBLISHED BY: DYNACOMP, INC.

REGRESSION 1 is a unique and exceptionally versatile one-dimentional least squares "polynomial" curve fitting program. Features include very high accuracy; an automatic degree determination option; an extensive internal library of fitting functions; data editing; automatic data and curve plotting; a statistical analysis (e.g. standard deviation, correlation coefficient, etc.) and much more. In addition, new fits may be tried without reentering the data. REGRESSION 1 is certainly the cornerstone program in any data analysis software library.
PRICE: $19.95, Cassette $23.95, Diskette

TITLE: SCIENTIFIC PLOTTER
PUBLISHED BY: INTERACTIVE MICROWARE, INC.

Produces graphs with the data supplied either as X, Y pairs or as Y values at a constant X value. It requires a 48K Apple II
PRICE: $25

TITLE: SCIENTIST
PUBLISHED BY:

A powerful scientific data base and statistics program which will turn your Apple into a mathematical and graphics tool. It will do simple statistics or such complicated functions as Chi- Square, Normal, Student-t, and Poisson. With the Data Base element you can build your own analytical programs. Applesoft II.
PRICE: $89.95

TITLE: SPUR GEARS
PUBLISHED BY: COMPUTER HOUSE DIV.

This program calculates; O.D., P.D., Circular Pitch, Measurement over Wires, Chordal Thickness, Arc Tooth Thickness, Involute of an Angle and Center Distance for Full depth or Stub Tooth External Gears.
PRICE: $35.00

TITLE: TFA (Transfer Function Analyzer)
PUBLISHED BY: DYNACOMP, INC.

This is a special software package which may be used to evaluate the transfer functions of systems such as hi-fi amplifiers and filters by examining their response to pulsed inputs. TFA is a major modification of FOURIER ANALYZER and contains an engineering-oriented decible versus log-frequency plot as well as data editing features. Whereas FOURIER ANALYZER is designed for educational and scientific use, TFA is an engineering tool.
FOURIER ANALYZER and TFA may be purchased together for a combined price of $29.95 (Cassettes) and $37.95 (Diskettes).
PRICE: $19.95, Cassette $23.95, Diskette

TITLE: TRIG/CIRCLE TANGENT
PUBLISHED BY: COMPUTER HOUSE DIV.

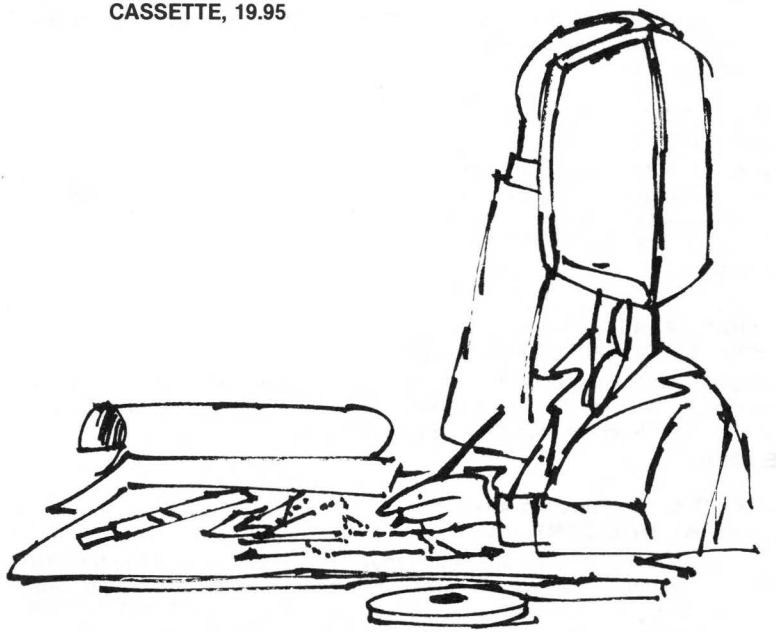
This program converts radians to degrees or vice/versa, it will display any trig function, it will calculate any unknown of a right or oblique triangle to 5 decmial places and/or degrees-minutes-seconds. It also calculates X and Y coordinates (Z and X for NC Lathe Programming) for tangent points for either one or two circles.

PRICE: $110.00

TITLE: UNI-SOLVE
PUBLISHED BY: EDU-WARE
MEMORY: 32K

Designed for the electronic hobbyist and engineer, this series of programs provides you with 24 major solution sets to problems encountered in engineering and design, at a fraction of the cost of any similar software. Equations include such diverse computations as transmission line formula, reactance, coil-winding models and modulation percentages, as well as those required in everyday use. Clear and easy access is provided to each of the subroutines through a master menu.
(Cassette version requires 48K and ROM Applesoft).

PRICE: DISK, 24.95
CASSETTE, 19.95



GAMES

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Addition, Subtraction, Multiplication, Division G-2
Alien G-2
Apple Lemans G-2
Big Letters G-2
Black Hole Chase G-2
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Music Utility G-5
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AMB (Anti-Ballistic Missle) G-5
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Blockade G-11
Both Barrels G-11
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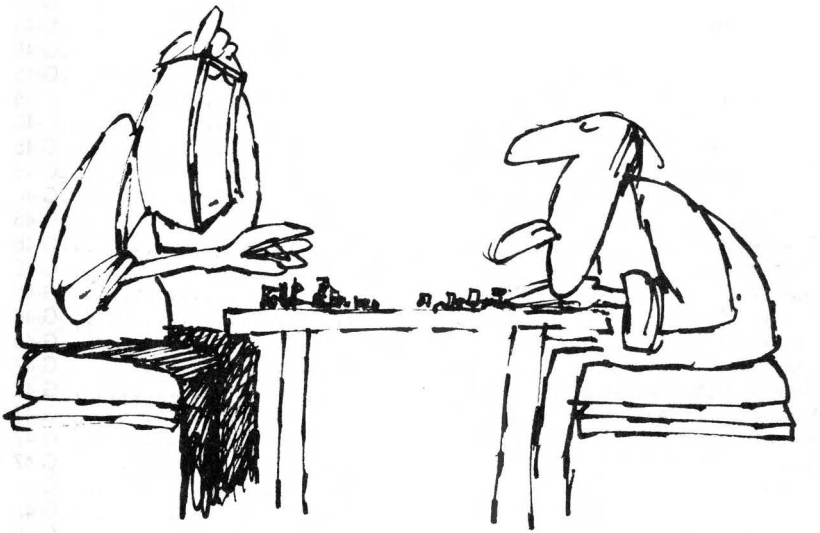
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TITLE: APPLE BARREL BUSHEL #1
PUBLISHED BY: APPLE BARREL
MEMORY: Disk, 32K
Tape, 16K

There are 25 programs all in one Disk or Tape. The titles are listed below, refer to alphabetical listing.

Mortgage Loan
Days Between Dates
Addition, Subtraction, Multiplication, Division
From "Add - Sub. - Mult. & Div." to "Think" are all programs on one disk.
Metric Conversion
Apple Lemans
Think
Mountain
Black Hole Chase
Demolition Derby
Tic Tac Toe
Savings
Checkbook
Dynamite
Luna C, T or L
Alien
Hi Res Text Writer
Music Utility
Shape Builder
Plot
Menu Utility
Screen Print
Pacifier
Inverser
Big Letters

With each package there's a 70 page manual provided.

PRICE: ALL FOR TAPE, $24.95
DISK, $29.95

THE STORY OF APPLE BARREL

Once upon a time, there was a great, wonderful and wise Apple Barrel that people would consult about business problems, school lessons, family finances and even play games with. (Who says you can't have run-on sentences end with a preposition - or proposition as the case may be? This Apple Barrel was a great community resource and everyone loved it. But as is so often the case, some bad person comes along who screws up a good thing for everybody. And so it was. A bad person named Turkey Rascal Snidely* (80 years old) came along, stole the Apple Barrel and hid it deep in a mountainside. Many years went by ... until one day a good person, named Wilford Oscar Zuchini*, came along and freed the Apple Barrel.

We have been able to capture some of the wit and wisdom of the Apple Barrel in this software. Your next question is, of course, "Gee, where is this wonderful Apple Barrel?" Well, the Apple Barrel is alive and well in Burbank, California. If you believe that, we've got some land in Florida that we'd like to talk to you about. Enjoy your programs.

*These names have been changed to protect the innocent and the not-so-innocent.

TITLE: ADDITION, SUBTRACTION, MULTIPLICATION, DIVISION

The math programs are simple, quick and fun for the right people. When you answer 5 correctly, the difficulty increases. One of the best uses we have seen for these programs is to use them as a model for individual instruction programs written specifically for a particular learning situation. As various public personalities say on occasion, "No Comment."

TITLE: ALIEN

You are on the spaceship NIMROD. You have a few minutes to break the code number that will open the weapons vault. And you want to do that because the only weapon that will safely destroy the alien is the antimatter laser rifle that is stored in the weapons vault.

The alien has killed the rest of the crew and is now searching for you. He wants you for your gourmet qualities.

When you enter numbers (and press RETURN) to break the code, Mother, the ship's computer will respond in any of the following 3 ways: first — no response, which means that none of the numbers in your guess is the code; second, "#" symbol — this means that one of your numbers is in the code, but in the wrong place; third, a flashing reversed "★" symbol — this means that one of your numbers is in the code and in the right place.

Comments: For all of you analytical geniuses, prescient persons, mind-readers and byte-bogglers out there — we know you'll never go over 10 attempts to break the code, but just for fun, you should enter some wrong guesses to see the comments that are waiting for you every once in a while. We could say something about pushing ESCAPE to escape the ALIEN via cyanide gas (a very final escape), but "wisdom" dictates otherwise.

TITLE: APPLE LEMANS

Apple Lemans can be as hard as the real race or as easy as a Sunday afternoon drive. You can vary the speed of your car and as you go faster the track becomes more treacherous. Apple Barrel will keep track of the high score, so you can have some fun competing with yourself or others.

TITLE: BIG LETTERS

Big letters is exactly that. The letters that spell APPLE BARREL at the beginning of Apple Barrel came from this alphabet.

Comments: Because of the differences of tape and disk, these letters are available on disk but not on tape. If you are a tape user and wish to have the big letters, you have our permission to save the letters from a disk unit onto your own tape.

TITLE: BLACK HOLE CHASE

You are being chased by creatures from a black hole. A black hole is an area of outer space (Yes, outer space is west of Cleveland), where gravity is so strong that even light rays can't escape. You must pilot your space craft across the galaxy and away from them as fast as possible.

At the same time, you must avoid three things: (1) moving your ship into your own vapor trail — it's radioactive, but will disappear after a while; (2) the edge of the galaxy; (3) the stars and planets in your galaxy. The edge of the galaxy is visible at first, then, little by little, minute by minute, the creatures make parts of the edge disappear by turning it into a black hole. Don't run into it or they'll get you.

Comments: We know you were expecting a game where you could search for the 18 holes at the Burning Tree Golf Course. (They disappeared last

week — the holes not the golf course.) But that is not this game. We think it beats looking for golf holes.

TITLE: CHECKBOOK

Checkbook can help you keep track of the balance of your checking account. You can add deposits, subtract checks and either smile or frown depending upon what your balance is. Your final balance is automatically saved for future reference when you exit this program when returning to the Master Menu or you can zero the balance.

Comments: Used properly, this program may save you the hassle that happens at our house once in a while — the checkbook somehow becomes overdrawn by several hundred dollars. You know the situation — you run a balance check on your account to make sure you have enough to go to the resorts for a week and you're $800.00 overdrawn. And then those "lively" discussions about who overdrew what. But that probably never happens at your house, does it?

TITLE: DAYS BETWEEN DATES

Days Between Dates calculates the number of days between two dates (just as you thought, right?)

The calendar was adjusted in 1582 A.D. (it was adjusted by someone else — we weren't there — we're clever but not that clever — but we're working on it), so you should try dates after that time. If you have a genuine need to work with Days Between Dates in years before 1582, we'd like to know what you're up to. Flash! We have just been given the first example of using Days Between Dates in years before 1582 A.D. The example is told to us as follows: If I have an ancestor born July 23, 1423 A.D. who dies April 11, 1477 A.D. — how old was he when he was destroyed by the Mongol hordes as they overran his village? Well, we took our cue from Mr. Abbot (Mr. Farnsworth's personal private executive secretary in the movie "Heaven Can Wait") who replied in the following way to a similar question: "I think you'd have to define the word destroy." This seemed to confuse and irritate our historian (it work in the movie either) and so we said, "Add 300 years to each date. That will give you the answer of 19627 days and all you have to do is divide 19627 by 365 and you have the number of years that your ancestor lived." Of course, there is a much faster way of doing it, but as any software house knows, the first thing people do with a program is look for holes, bugs and gaps. You'd never do that would you?

TITLE: DEMOLITION DERBY

Demolition Derby is a fast-moving game of strategy where two players try to force each other to run into the wall or their own trails. It looks so simple until you play someone who knows the various strategies you can use to win. Blue Player (on the left) uses the E, S, D and X keys to move up, left, right and down. Orange player (on the right) uses the I, J, K and M keys to move up, left, right and down. Each time you demolish your opponent by forcing him to crash you get a point. First player to get 15 points wins.

TITLE: DYNAMITE

Welcome to the wonderful world of Dynamite. Each of you light a stick and pretend you're the Statue of Liberty. Now douse your fuse (I said "fuse" not "booze") and read on.

There are 15 sticks of dynamite in an abandoned mine. All of them are unlit except the last one. The ghost of your dead partner has lit the last

stick of dynamite and now he wants to play a little game with you.
Comments: If you lose and get stuck in the mine, the really bad news is that Howard Cosell spends every Wednesday and Thursday in the mine with you. We realize that is unfair to you, but then again, when we think of you — maybe it's unfair to Howard! Well, you two can discuss that every Wednesday and Thursday. Good Luck with the ghost of your dead partner. By the way, why did you shoot him? Oh, you say he used to listen to Howard Cosell on the radio and TV all the time? And the jury let you off because it was justifiable homicide? How true, how true.

TITLE: INVERSER

Inverser is a routine that quickly reverses the entire screen. You saw a demo of this effect at the beginning of APPLE BARREL. This routine is not really one of the "25" programs, but we thought we'd include it.
Comments: Speaking of inversing, do you know what you get when you inverse Jimmy Carter?

TITLE: MORTGAGE LOAN

Mortgage Loan will compute the various factors of a loan, including payment amount, interest rate, number of payments, amount of loan, total amount paid and total interest paid.
To use Mortgage Loan, select Block 1 from the Master Menu. This will load Mortgage Loan, Days Between Dates and Calendar. These programs have been included in a single block so that you can quickly pull the programs from RAM and thus refer quickly from one block to the other in making your financial calculations and decisions. In using Mortgage Loan or the other programs Apple Barrel will automatically supply the "$" symbol where appropriate. If you add a comma, Applesoft will ignore anything after the comma, so do not use commas. As you may discover, if you enter a letter instead of a number, Applesoft will ignore the letter(s) and all that follows the letter(s). If the numbers that you enter do not compute, Apple Barrel will automatically switch you back to the Mortgage Loan menu and display at the top of the screen "ERROR—DOES NOT COMPUTE".

TITLE: MOUNTAIN

You are the operator of a gigantic 'KABOOM" cannon. The cannon is so huge that only the top of the barrel appears on the screen (as the blue shape on the far left.) You have 3 targets on the other side of the big green mountain. The targets have values of 10, 20, or 30 points. The targets change position randomly. The mountain changes size and shape each time you shoot. You only have 250 ammo charges, so try to hit the 30 point target each time. Apple Barrel will automatically keep track of your points and the number of ammo charges you have left.
Comments: You only have 250 units of ammo charges left from yesterday's battle. You must very carefully calculate how much charge to use on each shot, so you have enough charge to shoot clear over the mountain as many times as possible. If you tried our suggestions in the above instructions you have learned a few things already. As little as 15 units of charge will let you hit the far right target if the mountain is low. The targets are canisters of film that contain all the terrible TV commercials that we've had to suffer through this year. And if you don't destroy them, we'll have to watch them next year too. Good luck and good shooting.

TITLE: MUSIC UTILITY

Music Utility contains various sound effects. You can use them to add a little sparkle to your programs.

By looking at the listing of the program you can see what routine produces what sound. To hear what a particular routine sounds like, get into Basic, type 0, the routine, press RETURN, type RUN, press RETURN and the routine will play. To include them in your program, simply type the appropriate line number and the routine.

Comments: Did Lawrence Welk start this way?

TITLE: PACIFIER

Pacifier is a random graphics display generator.

Comments: A great little continuous graphics demo.

TITLE: PLOT

Plot will plot various math equations on the screen, quickly.

Comments: We were amazed at the beauty of some of the graphics that we tried. And how nice it would have been to have this program when I took Trigonometry. Let us know what you come up with.

TITLE: SHAPE BUILDER

Shape Builder will let you begin drawing shapes by simply using the I, J, K and M keys with the space bar to maneuver the cursor to draw your shape. With this program you can create elaborate patterns, figures, etc. in just a few minutes. And if you don't like the results, you can quickly redo it.

Enter the GREAT SHAPE CONTEST! Everyone but Farah can enter. Send in your software registration card for more details. The prize is a box of ten Dysan disks for your Apple — a $50.00 value!

Comments: This program will be extremely helpful to users that have already worked with the Apple in building shapes. As you can see from the opening graphic displays at the beginning of the Apple Barrel, we have used this program extensively. If you are brand new at shape building, then this will be an educational experience for you. Use the Apple manual and you should have a good time.

TITLE: THINK

Think is a test of your memory circuits (the ones in your head).

There are six rectangles across the screen numbers 1-6. The Apple Barrel has assigned a different musical tone to each rectangle. The Apple Barrel will light up a rectangle and play a musical tone at the same time. You respond by pressing the appropriate number on the keyboard. If you are correct, you get a point. If you are incorrect, you get a strike. Three strikes and you are out. The Apple Barrel will next sound two tones, then three etc.

Comments: The in-house record is 22 tones. Good Luck.

TITLE: ABM (Anti-Ballistic Missile)
PUBLISHED BY: MUSE

Invader and Asteroids move over ... ABM has arrived! Command your launch sites to fire 1 and 5 kiloton anti-ballistic missiles (ABMs). Save the East Coast from the increasingly fierce Enemy nuclear attack. Position your target crosshairs to blast the green streamers before they fireball your cities — or worse — split into multiple warhead MIRVs turning the entire coast into a thundering specter of destruction. Hi-res color graphics, sound, high score memory, with paddle or joystick control. On disk, requires 32K, Applesoft ROM.
PRICE: $24.95

TITLE: ALIEN ENCOUNTERS
PUBLISHED BY: PROGRAMMAR

This is an ACTION GAME in HIGH RESOLUTION graphics. The S.S. Programma has been sent out to the Bermuda Triangle to patrol and search the waters and try to solve the mystery of all the disappearances. Armed with a POWERFUL LASER CANNON and MISSLE LAUNCHER it cuts through the waters of the ATLANTIC OCEAN in search of an ALIEN ENCOUNTER. One player is the ALIEN and the other is the CAPTAIN of the S.S. PROGRAMMA.

PRICE: TAPE, 6.95

TITLE: APPLE BOWL
PUBLISHED BY: APPLE COMPUTERS

Enjoy this realistic simulation of a bowling alley. You have complete control of the ball; APPLE keeps the score.

PRICE: DISK, 15.00
TAPE, 15.00

TITLE: APPLE DERBY
PUBLISHED BY: POWERSOFT, INC.

Apple Derby is a low resolution graphics game. The game simulates a horse race with five horses. The number of players, races, and amount of the bets can vary.

PRICE: TAPE, 9.95

TITLE: APPLE FUN
PUBLISHED BY: INSTANT SOFTWARE

We've taken five of our most popular programs and combined them into one tremendous package full of fun and excitement. This disk-based package now offers you these great games:

MIMIC — How good is your memory? Here's a chance to find out! Your Apple will display a sequence of figures on a 3 X 3 grid. You must respond with the exact same sequence, within the time limit.

There are five different, increasingly difficult versions of the game, including one that will keep going indefinitely. Mimic is exciting, fast paced and challenging — fun for all!

AIR FLIGHT SIMULATION — Your mission is to take off and land your aircraft without crashing. You're flying blind: on instruments only.

You start with a full tank of fuel, which gives you a maximum range of approximately 50 miles. The computer will constantly display updates of your air speed, compass heading and altitude. Your most important instrument is the Angle of Ascent/Bank Indicator. It will tell if the plane is climbing or descending and whether banking into a right or left turn.

After you've acquired a few hours flying time, you can try flying a course against a map or doing acrobatic maneuvers. Get a little more flight time under your belt and the sky's the imit!

COLORMASTER — Test your powers of deduction as you try to guess the secret color code in this Mastermind-type game. There are two levels of difficulty, and three options of play to vary your games. Not only can you guess the computer's color code, but it will guess yours! It will also serve as referee in a game between

two human opponents. Can you make and break the color code ...?
STAR SHIP ATTACK — Your mission is to protect our orbiting food station satellites from destruction by an enemy star ship. You must capture, destroy or drive off the attacking ship. If you fail, our planet is doomed.
TRILOGY — This exciting contest of logic has its origins in the simple game of tic-tac-toe. The object of the game is to place three of your colors in a row into the delta-like, multi-level display. The rows may be horizontal, vertical, diagonal and wrapped around, through the "third dimension". Your Apple (or human opponent) will be trying to do the same, and there are many paths to victory. You can even have your Apple play against itself!
Minimum system requirements are an Apple II or Apple II Plus computer with 32K of memory and one minidisk drive. Mimic requires Applesoft in ROM, all others run in RAM or ROM Applesoft.
PRICE $19.95

TITLE: APPLE INVADER
PUBLISHED BY: PROGRAMMA INTERNATIONAL

The object of this action-filled game is to destroy as many invaders as possible while avoiding their deadly bombs. The invaders get closer with each pass across the screen. The more destroyed, the faster those remaining will approach. Get more points by hitting deeper into the invading ranks. There is a valuable mystery score for hitting that flying saucer whenever he chances by. Guaranteed to drive you wild. Arcade quality Hi-Res action. ASSEMBLY 32K. INTEGER/ASSEMBLY 48K.

PRICE: TAPE $15.95
DISK $19.95

TITLE: APPLE LIFE
PUBLISHED BY: MAD HATTER SOFTWARE

This is a full featured game of LIFE that plays by Conway's rules as featured in Scientific American. The game is displayed on a forty by forty grid and displays 90 generations a minute. You enter beginning patterns from the keyboard. Patterns may be saved or loaded at any time.
16K.
PRICE: $9.95

TITLE: APPLE — SIMON SEZ
PUBLISHED BY: BARTON ENTERPRISES, INC.

Challenge your wits by testing your memory and concentration. Repeat exactly the sequence of colors and sounds randomly generated by APPLE—SIMON SEZ and you win, or program your own sequence of colors and sounds to baffle your friends. Play with both colors and sounds or just colors or just sounds. If you lose, APPLE—SIMON SEZ'S humuliating "razz" lets you and everyone around know.
Six game variations for your enjoyment
PRICE: $9.95, plus $.75 shipping and handling.

TITLE: APPLESHIP
PUBLISHED BY: PS

Appleship is a computer game of battleship in its traditional form. Two players enter ships into their respective oceans and then take turns trying to sink their opponent's ships. The winner is the first one to sink all of their opponent's ships. Great low-res graphics!
PRICE: Tape, $14.95

TITLE: APPLE TEK, SPACE WAR
PUBLISHED BY: APPLE
MEMORY: 16K

Apple's version of the popular galactic warfare game. Supplied with: Man the guns of a rebel starship and try your marksmanship.

PRICE: TAPE 15.00

TITLE: APOLLO ASCENT
PUBLISHED BY: SYNERGISTIC SOFTWARE

Blastoff to Orbit to Rendezvous. Applesoft plus 6K required.

PRICE: 7.95

TITLE: APOLLO LANDER
PUBLISHED BY: SYNERGISTIC SOFTWARE

Semi simulation of separate and touchdown of lunar excursion module.

PRICE: 7.95

TITLE: ARTILLERY DUEL
PUBLISHED BY: PROGRAMMAR SOFTWARE EXCHANGE

Duel between two bases with mountain terrain. High Resolution Graphics. 16K.

PRICE: 10.00

TITLE: ASTEROIDS IN SPACE
PUBLISHED BY: QUALITY SOFTWARE

If you liked "Invaders", you'll love ASTEROIDS IN SPACE by Bruce Wallace. Your space ship is traveling in the middle of a shower of asteroids, Blast the asteroids with lasers, but beware — big asteroids fragment into small asteroids! The Apple game paddles allow you to rotate your space ship, fire its laser gun, and give it thrust to propel it through endless space. From time to time you will encounter an alien space ship whose mission is to destroy you, so you'd better destroy it first! High resolution graphics and sound effects add to the arcade-like excitement that this program generates. Runs on any Apple II with at least 32K and one disk drive.

PRICE: $19.95

TITLE: A STELLAR TREK
PUBLISHED BY: RAINBOW COMPUTING, INC.

The definitive high resolution COLOR version of the clasic Startrek game. A STELLAR TREK is a computer game which utilized the unique features of the Apple II Computer to bring to the game enthusiast a colorful, exciting battle simulation. Three different Klingon opponents ... The Romulan Star Empire has joined forces with the Klingon Empire ... your battleground is the entire galaxy. You have many command perogatives; movement throughout the galaxy, use of starship weaponry, maintenance of energy reserves, repair of incurred damages, and more. Comes with a 22 page set of descriptive and instructive material.

PRICE: DISK, 24.95

TITLE: ATOMIC CASINO
PUBLISHED BY: PROGRAMMER INTERNATIONAL, INC.

This game will test your sense of time. The object is to amass the largest amount of CASH by guessing the amount of APPLEADIUM you have. APPLEADIUM is a radioactive element that has a half life of 3 minutes.

PRICE: TAPE, 6.95

TITLE: BASEBALL
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Play in the APPLE World Series! This two-player game is played according to Major League rules. Game paddles control the infielders and outfielders, as you pitch changeups, fastballs, sliders, curves or knuckleballs. When you're at bat, good timing is the key as you swing the bat with a tap on the space bar. This exciting graphics game even includes stealing, double plays, and sacrifices under computer control.

TITLE: BASEBALL
PUBLISHED BY: MUSE SOFTWARE
MEMORY: 16K
HARDWARE: APPLESOFT ROM OR APPLE II PLUS

Bring the excitement of Major League baseball to your Apple II. Baseball is a high resolution action game with outstanding player control. Strikes and outs are tallied and a scoreboard is displayed after every batter. So get up to bat, watch out for those slow pitches, hit the ball and hope that the opposing team does not catch it. A challenging game and a must for sports fans.
PRICE: TAPE, 14.95

TITLE: BASEBALL FEVER
PUBLISHED BY: SOFTAPE

Catch the fever with this ball game that never gets rained out. You are the pitcher, batter and manager for your team. As manager you control line-ups, pitching staff and base stealers. The optional sound effects enhance the colorful animation. When the game is over you can save the game statistics to tape or disk and you are on your way to a winning season.
PRICE $12.95 Diskette

TITLE: BASKETBALL
PUBLISHED BY: PROGRAMMA INTERNATIONAL

An action game based on the popular electronic game. It's you against the opposing team in a race against time (user selected). Run down court as you dodge to fake out your opponent and shoot to score two points for each basket you make. Lo-Res graphics with sound. INTEGER. 16K.
PRICE: TAPE $9.95.

TITLE: BATTER UP!! A MICROBASEBALL GAME
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Savon) This program truly tests your batting skills. Includes 3 levels of display. #02801, PET: #02803, TRS-80 Level II.
PRICE: $10.95

TITLE: BATTLESHIP
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

You are the driver of a tank and it is your job to shoot down the enemy in your three passes across the BATTLEFIELD. Watch out for the LASER SATTELITE. Excellent graphics in HIRES.
PRICE: TAPE, 9.95

TITLE: BATTLESHIP
PUBLISHED BY: CDS
MEMORY: 16K
The ships are there. Can you fire a hit?
PRICE: TAPE or DISK, 14.95

TITLE: BATTLESHIP COMMANDER
PUBLISHED BY: QUALITY SOFTWARE
A game of strategy. You and the computer each start out by positioning five ships of different sizes on a ten by ten grid. Then the shooting starts. Place your volleys skillfully — a combination of logic and luck are required to beat the computer. Cartoons show the ships sinking and announce the winner. Sound effects and flashing lights also add to the enjoyment of the game. Requires at least 32K of RAM.
PRICE: $14.95, Cassette $19.95, Diskette

TITLE: BEST OF BISHOP
PUBLISHED BY: SOFTTAPE
An exciting and varied collection of Bob Bishop's superb, involving, and highly imaginative programs. Ther are six in all including Star Wars (a Hires game based on the popular movie), Space Maze (A hires game of skill and coordination), Rocket Pilot (A space pilot simulation game), Suacer Invasion (You protect Earth from attack by firing land to air missiles!!), Dynamic Bouncer (An interesting graphic demo) and ball (A Hires demo showing the complexity of the movement of a bouncing ball). 32K.
PRICE: 39.95

TITLE: THE BEST OF MUSE
PUBLISHED BY: MUSE SOFTWARE
Maze Game, Escape, Side Shows, Tank War, The Music Box are all included on this disk. These Programs run on any Apple II with disk. Some require Integer Basic and will not run on the Apple II Plus.
32K.
PRICE: $39.95

TITLE: BILL BUDGE'S SPACE ALBUM
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER
• Death Star • Solar Shootout • Tail Gunner • Asteroid. For Apple II and II Plus. Requires 32K.
PRICE: $39.95 on Diskette

TITLE: BLAST/SPACE BATTLE
PUBLISHED BY: MAD HATTER SOFTWARE
Both of these are real-time, HIRES action games. They both feature a number of levels of difficulty and make use of the paddles and sound. In BLAST, two players take turns trying to shoot down the other's space ship. In SPACE BATTLE, each player has control of a spaceship and trys to destroy the other player's ship. Both ships are equipped with energy screens which must be depleted before that ship is destroyed. The graphics on these are great!
16K
PRICE $14.95

TITLE: BLITZKREIG
PUBLISHED BY: PROGRAMMER INTERNATIONAL, INC.

This shoot-em-down HIRES GAME is exciting and fast moving. You are at a large anti-aircraft gun and it is your job to shoot down all enemy aircraft.
PRICE: TAPE, 15.95

TITLE: BLOODY MURDER
PUBLISHED BY: STONEWARE MICROCOMPUTER PRODUCTS
A 2-player knife fight — rated "R" for violence! Great hi-res color graphics, fast animation, gruesome sound effects and visuals, 3 levels of play, 48K/disk; play it with someone you hate!
PRICE: $19.95

TITLE: BLOCKADE
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE
In this game, each player controls a colored marker which leaves a trailing path. The object is to keep your marker in motion longer than your opponent by not running into a wall, the other player's path. Direction is controlled on the keyboard, but you can't stop moving. Game options include one or two player games, and accelerated speeds which increase as the game progresses.

TITLE: BLOCKADE
PUBLISHED BY: PROGRESS
MEMORY: 16K
Two people try to block each other by building walls and blocking the other.
PRICE: TAPE, 9.95

TITLE: BOTH BARRELS
PUBLISHED BY: SIRIUS SOFTWARE
BOTH BARRELS includes two games on the same diskette. DUCK HUNT is the traditional hunt from the blind, complete with dogs to retrieve the ducks and even an occasional dog fight to liven up the action. Hi-res, of course. HIGH NOON has you pitted against an entire town of BAD GUYS. They'll attack from doorways, windows, and even rooftops. Be quick or be dead. This has some of the most interesting graphics effects you'll see on the APPLE. Nine levels of play, one to match any age group. These games have great action, great graphics, and great sound effects. What else could you ask for? BOTH BARRELS requires 48K with Applesoft in ROM.

TITLE: BOWLING
PUBLISHED BY: PROGRESSIVE SOFTWARE
Multi-player program. Various skill levels. Sound effects. Frame by frame results and total score displayed. Also, on same diskette, TIC-TAC-TOE — Color graphics. Announces winner.
PRICE: $19.95

TITLE: BOWLING/TRILOGY
PUBLISHED BY: INSTANT SOFTWARE
MEMORY: 20K
Enjoy two of America's favorite games transformed into programs for your Apple:
Bowling-Up to four players can bowl while the Apple sets up the pins and

keeps score. Requires Applesoft II.
Trilogy-This program can be anything from a simple game of tic-tac-toe to an exercise in deductive logic. For one player.
PRICE: TAPE, 7.95

TITLE: BREAKTHRU
PUBLISHED BY: PROG
MEMORY: 16K
This is a very popular game. The object is to knock out or BREAKTHRU the layers of wall with a ball you hit with the paddle.
PRICE: TAPE, 9.95

TITLE: BRICK OUT
PUBLISHED BY: APPLE COMPUTERS
MEMORY: 16K
Knock all the bricks out of the playing field and you're a winner.
PRICE: TAPE, 7.50

TITLE: BRICKS
PUBLISHED BY: APPLE COMPUTERS
MEMORY: INTEGER BASIC 4K
Tote those bales
Lift those bricks
Your Apple II is up to more tricks!
Take one, two or three
Then you'll see
What your computer's response will be.
PRICE: CASSETTE, 4.00
DISK, 6.00

TITLE: CAMERA OBSCURA
PUBLISHED BY: PROG
MEMORY: 16K, INTEGER BASIC
This is a low res color graphic game on an 8 by 8 grid. The computer selects 4 squares to hide its peices and you try to determine where they are with clues given to you by the computer as you place RAYS around the perimeter of the grid.
PRICE: TAPE, 6.95

TITLE: CANTER DOWNS
PUBLISHED BY: PROG
MEMORY: 16K, INTEGER BASIC
This is an excellent example or COMPUTER ANIMATION done in HIRES graphics. Two players jump their horses over frnces and race to the finish line. Real time animation.
PRICE: TAPE, 15.95

TITLE: CATCH THE PIG
PUBLISHED BY: PROGRESS
MEMORY: 16K
An upper grade school educational game which teaches, up to four students at one time, the cartesian coordinate system. The student(s) chases a

graphics "pig" through the 4 quadrants. Many levels of play. One to four students can play. Disk or tape. Written by Judy Pegg.

PRICE: TAPE, 9.95
DISK, 16.95

TITLE: CHASE
PUBLISHED BY: PROGRAMMA
MEMORY: 16K

CHASE is a game in which you are being pursued by a number of computer controlled robots. As you frun from them, you attempt to move in such a way as to make the robots smash into barriers. This color graphics game allows nine levels of play.
By Harry Tarnoff 16K

PRICE: 9.95

TITLE: CHECKERS
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Requires Applesoft or Applesoft II BASIC.
This is the APPLE version of the popular board game, with color graphics. Test your strategy against the computer. The computer does not look ahead for future moves, hence it is best suited for beginning players.

TITLE: CHECKERS KING
PUBLISHED BY: PERSONAL SOFTWARE INC.

You've probably forgotten how much fun checkers can be.
Personnel Software Checker King lets you play against your computer at eight levels of difficulty, from simple to highly competitive. And you can change levels during a match. Checker King's unique SAVE feature allows you to store in memory up to three board situations and play them again. You can also create your own situations, then challenge Checker King. Or you can modify any situation which occurs during play. And you can even correct your mistakes with nary a word of admonishment from Checker King.
You can switch sides with Checker King at any point, or watch as Checker King plays both sides of the board. You might learn a few moves.!
Checker King makes full use of your system Checker King makes full use of your system's graphics capabilities. And checks all moves for legality. You can double or triple jump and king your pieces-just like real checkers, using standard checker rules.

PRICE: DISK, 24.95
TAPE, 19.95

TITLE: CLOWNS & BALLOONS
PUBLISHED BY: PROGRAMMA INTERNATIONAL

Ladies and gentlemen! Please direct your attention to the center ring where we are proud to introduce the latest addition to our traveling circus ... the Programma Brothers! CLOWNS & BALLOONS is a zany Hi-Res game complete with sound, which combines the excitement of a circus with the challenging fun of an arcade game. It's you against the computer, you control the action with paddle O. Move the open end of the 'teeter totter' under the clowns as they jump up and down, try to pop the two rows of balloons at the top of the screen. A musical fanfare is played whenever 200 or more points are awarded. How long has it been since you've been to the circus?

INTEGER/ASSEMBLY. 16K.
PRICE: TAPE $15.95

TITLE: COLOR LIFE GAME
PUBLISHED BY: AGENT COMPUTER SERVICES
MEMORY: 8K
Uses the entire screen to display the generations. Each generation is a differnt color. This program is written in Basic with a machine language subroutine so that the generations speed by very quickly.
PRICE: CASSETTE, 6.50
DISK, 11.50

TITLE: COLOR STARTRAK
PUBLISHED BY: PROG
MEMORY: 8K, INTEGER BASIC
Here is a low resolution, full color version of the most famous computer game of all time. In this program you pilot the Starship Enterprise through the hostile Klingon forces. Your shots bounce around the galaxy and if you are not careful you can easily destroy one of your own starbases or the Enterprise itself.
PRICE: TAPE, 6.95

TITLE: COMMANDO
PUBLISHED BY: WISE OWL WORKSHOP
A Graphical Chase Game.
A single player game where the object is to surround the German General with paratroop commandos. The Paratroop Commander places his men while the General tries to escape. Promotions and Demotions are awarded depending upon the success of the mission. The game comes with both easy and hard version. 8K
PRICE: 9.95

TITLE: COMPU WAR II
PUBLISHED BY: AUTOMATED SIMULATIONS
MEMORY: 16K Basic Language
Fly through spce in control of a powerful ship. Try to attack other ships before they attack you. Use your system controls computer to help through. Program is written with sound effects and routines for non duplicating games.

PRICE: 9.95

TITLE: CONEY ISLAND
PUBLISHED BY: PROG
MEMORY: 16K, INTEGER BASIC
This is a color graphics SHOOTING GALLERY game. Use the paddles and buttons to fire upon the moving duck, two moving targets and an aoccasional periscope.
PRICE: TAPE, 9.95

TITLE: COUNTRY DRIVE
PUBLISHED BY: PROG
MEMORY: 8K INTEGER BASIC

Test your driving ability on the Apples screen using its color graphics. The object of the game is to drive your car along the winding road without going off the edge.

PRICE: TAPE, 6.95

TITLE: CRAZY 8s
PUBLISHED BY: SOFTAPE

Crazy 8s — Tired of Solitaire? Then play Crazy Eights with a worthy opponent. The Apple plays with its cards face up or hidden — your choice. And, if you'd like, the Apple will help you choose playable cards. Great for adults and easy enough for children. 24K.

PRICE: $9.95 Cassette

TITLE: CROSS CHASE
PUBLISHED BY: PROGRAMMA

Cross Chase is a game for two players. One player is represented by a blue box, the other player by a red dot. The object is for the blue box to catch the red dot while avoiding the obstacles. There are ten levels of play for each player.

TITLE: CUBIK
PUBLISHED BY: POWERSOFT INC.
MEMORY: 16K, INTEGER

Cubik is a high resolution graphics game. The game is a three-dimensional version of tic-tac-toe played on four planes, each plane being four rows deep and four rows wide. The object of the game is to place four tokens in a row or diagonally along any three-dimensional plane. The game may be played against the computer or another person.

PRICE: TAPE, 9.95

TITLE: CYBER STRIKE
PUBLISHED BY: SIRIUS SOFTWARE

CYBER STRIKE is brand new for the Apple. A full 48K of assembly language programming with animation and original 3D effects that you haven't seen on the Apple before. MIND BOGGLING! Everyone said a game like this wasn't possible on the Apple but we did it; also includes a real time clock (Software implemented) and several levels of play. CYBER STRIKE is destined to be the largest seller of the 1980 holiday season. Uses either 13 or 16 sector Apple II, II + or III. Order this one in large quantities!!

PRICE: $39.95



TITLE: DARTS
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

How's your aim? Play darts and find out. You have six darts to throw at a dartboard. The game paddles control the position of the darts. Can you hit the Bullseyes?

TITLE: DEATH RACE
PUBLISHED BY: PROG
MEMORY: 16K, INTEGER BASIC

Another example of an excellent HIRES GRAPHIC ARCADE TYPE GAME, DEATH RACE proves to be challenging. You drive your car around and try to run over people moving on the road. When you hit one he disappears and is replaced by a marker. You score points for each object you hit.
PRICE: TAPE, 15.95

TITLE: DEFLECTIONS
PUBLISHED BY: PYGMY PROGRAMMING

Deflections is a real-time low-resolution color graphics game for the Apple II. The player uses the push buttons on the game paddles to place an angled deflector in the path of a moving runner changing its' direction. Using these deflectors, the player directs the runner to any of up to 10 targets.
There are two levels of skill and time, the number of targets and the number of deflectors can be used for comparative scoring.
More challenging than you think!
PRICE: 9.95

TITLE: DEPTH CHARGE
PUBLISHED BY: PROG
MEMORY: 16K, INTEGER BASIC

You are the pilot of a P.T. BOAT in this HIRES GAME, that drops depth charges on enemy submarines. You normally get 3 passes but if you score over 600 points, you win an extra pass.
PRICE: TAPE, 15.95

TITLE: DEMO TAPE
PUBLISHED BY: S.S.

One game and two general interest programs. Specify Basic, Applesoft, or Applesoft II.
PRICE: 5.95

TITLE: DODGEM
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

In Dodgem, two sets of pieces move at right angles across a checker style board. The object is to move all your pieces across the board and off the opposite edge. One player moves from the bottom to the top while the other moves left to right. You may play Dodgem against the APPLE or a friend. Six board sizes and action sound effects.

TITLE: DEVIL'S DUNGEON
PUBLISHED BY: RAINBOW COMPUTING, INC.
MEMORY: APPLE 16K INTEGER

Let your imagination run wild with this fantasy game. You will be enthralled by an exciting journey into the Devil's Dungeon, where evils lurk. Monsters, demons, poisonous gas, dropoffs and terrors impede your path to enticing treasures. Text mode. Instruction book included.

PRICE: TAPE $10.00

TITLE: THE DRAGON'S MAZE
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

Try to get out of the maze before the dragon eats you.
PRICE: TAPE or DISK, 14.95

TITLE: DUAL RACE
PUBLISHED BY: SYSTEM DESIGN LAB
MEMORY: 16K

A very exciting and challenging auto race game for two players. Each player competes against the other for the highest score by using the same paddles for acceleration and control. This game is very fast paced and inherently creates strategic competition, and therefore may not be a suitable game for the timid. DUAL RACE is sure to give hours of enjoyment for all ages.
PRICE: TAPE, 16.95
DISK, 20.95

TITLE: DUELING DIGITS
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Do you have a good memory for sequences of numbers? Play Dueling Digits and find out. In this game, the computer presents a digit and tone, then erases it. You then type in the same digit. After each turn, the computer repeats all the previous digits and adds a new one, and you try to type in the entire sequence. The round is over when you make four mistakes. For up to four players. Two skill levels.

TITLE: DYNAMAZE
PUBLISHED BY: POWERSOFT INC.
MEMORY: 16K, INTEGER

A dazzling new real-time game. You move in a rectangular game grid, drawing or erasing walls to reflect balls into your goal (or to deflect them from your opponent's goal). Every ball in your goal is worth 100 points, but you lose a point for each unit of elapsed time and another point for each time unit you are moving. Control the speed with a game paddle: play as fast as ice hockey or as slowly and carefully as chess. Back up and replay any time you want to; it's

a reversible game.
What is a REVERSIBLE GAME? You can stop the play at any point, back up and then do an "instant replay", analyzing your strategy. Reversibility makes learning a challenging new game more fun. And helps you become a skilled player sooner.
PRICE: TAPE, 9.95

TITLE: DYNAMIC BOUNCER
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE
Watch a ball move through a maze of colorful, changing obstacles in this creative graphics demonstration.

TITLE: ECHO
PUBLISHED BY: PROGRAMMA
MEMORY: 16K
Echo is a game of follow the leader. Colored boxes are drawn on the screen and a group of tone's are heard. Each tones corresponding box is marked with a black square. The object of echo is for the player to repeat the tones by pressing the corresponding key on the keyboard. An additional tone is added with each successful round.
PRICE: 6.95

TITLE: E.S.P.
PUBLISHED BY: EDU-WARE
MEMORY: 32K
In still, small hours of the morning, have you ever wondered about Extra Sensory Perception? This enlightening and fun-filled game gives you the chance to find out whether you and your friends possess these seemingly magic powers. One program tests for telepathic skills, another for Psychkinesis (the influencing of the behavior of inanimate objects and phenomena).
PRICE: CASSETTE, 9.95
DISK, 15.95

TITLE: ESCAPE
PUBLISHED BY: MUSE SOFTWARE
An exciting 3-D adventure with special color graphics that place you inside a maze of hallways. Find your way out by following the logical clues that people inside will give you. But be careful ... the liars will not hesitate to give you false maps and compasses. It's hard to quit this game! Rated the number 1 Apple cassette program by the Marin Computer Center.
PRICE: TAPE, 12.95

TITLE: FANCY FROGS
PUBLISHED BY: COOK COMPUTER COMPANY
This is a superbly crafted program by Earl Kayser. It makes excellent use of Apple Color Graphics to develop logic, foresight and problem-solving strategies.
PRICE: 7.95

TITLE: FASTGAMMON
PUBLISHED BY: QUALITY SOFTWARE

Sound, hi-res color, and cartoons have helped make this the most popular backgammon-playing game for the Apple II. But don't let these entertaining features fool you — FASTGAMMON plays serious backgammon. Requires at least 24K of RAM.

PRICE: $19.95, Cassette $24.95, Diskette

TITLE: FIGHTER PILOT
PUBLISHED BY: SOFTAPE

It's war, and your mother ship is under attack. The adrenelin flows as you accelerate through the launch tube and penetrate the void of space. With all systems operating, your sensors show the direction of the enemy racing to meet you. After a few bursts he explodes, and you fly through his debris to meet the next one. Fighter Pilot is a fast-moving game of excitement and skill. The graphics program, written in Integer Basic, requires 16K.

PRICE: $12.95 Cassette

TITLE: FLIGHT SIMULATOR
PUBLISHED BY: DYNACOMP, INC.

A realistic and extensive mathematical simulation of take-off, flight and landing. The program utilizes aerodynamic equations and the characteristics of a real airfoil. You can practice instrument approaches and navigation using radials and compass headings. The more advanced flyer can also perform loops, half-rolls and similar aerobatic maneuvers.

PRICE: $17.95 postpaid;

TITLE: FLYSWATTER
PUBLISHED BY: PROG
MEMORY: 8K, INTEGER BASIC

A zany adventure in the art of flyswatting, complete with animated closeups of the little darlings. This is a very good lores game. It is you against the computer controlled flys. You weapon, a FLYSWATTER. Build your efficiency by not wasting swats.

PRICE: TAPE, 9.95

TITLE: FOOTBALL
PUBLISHED BY: PROGRAMMA
MEMORY: 16K

Football is a game for two layers, each taking turns playing offense against the computer's defense. The field, shown in color graphics, is a five by ten yard grid. By hitting various keys on the apple keyboard, the players can move in any direction, pause or kick. The object of the game is to score the most points. The game has 20 levels of play, a time clock, and a half time.

PRICE: 9.95

TITLE: FOOTBALL PREDICTIONS
PUBLISHED BY: PROGRAMMA INTERNATIONAL

Enter the statistics about the teams in the league, and this program makes predictions about wins and point spreads for upcoming games. Has proven surprisingly accurate in its predictions. Bets anyone?
INTEGER. 16K.

PRICE: TAPE $19.95

TITLE: FRACAS
PUBLISHED BY: QUALITY SOFTWARE

A fantastic adventure game like no other — up to eight players can participate in FRACAS at the same time. Journey in the land of FAROPH, searching for hidden treasure while warding off all sorts of unfriendly and dangerous creatures like the Ten Foot Spider and the Headless Horseman. You and your firends can compete with each other or you can join forces and gang up on the monsters. Your location is presented graphically and sound effects enliven the battles. Save your adventure on diskette or cassette and continue it at some other time. Requires at least 32K of RAM.

PRICE: $19.95, Cassette $24.95, Diskette

TITLE: FOREIGN LEGION/COMMANDO
PUBLISHED BY: WISE OWL WORKSHOP
MEMORY: 8K

A two player color graphics game. One player represents the Legion, the other represents the Arabs. The object of the game is to cross the desert and take control of the Oasis. Included with French Foreign Legion is another program, the computer. The object is to surround either General Guderian or General Rommel. The program has a number of interesting traps with sound effects.

PRICE: 9.95

TITLE: FRENCH FOREIGN LEGION
PUBLISHED BY: WISE OWL WORKSHOP
MEMORY: 8K

A color graphics game. The French Foreign Legion and the Arabs leave their encampment and cross the desert to take control of the oasis. The game paddle controls are used to move the troops on the game display. There are three different verisons of the game. (Also includes Commando).

PRICE: 9.95

TITLE: FUNPAK I
PUBLISHED BY: SYSTEM DESIGN LAB
MEMORY: 16K

A small library of 5 programs all rolled into one. If you like challenge, the Rat Race Maze, Mine Field, or Canyon Bomber has it. On the other hand, if you're interested in a little sound odyssey, then try the Music Machine or Sound. The FUNPAK I is sure to give hours of enjoyment.

PRICE: TAPE, 9.95
DISK, 13.95

TITLE: GALACTIC BATTLE
PUBLISHED BY: RAINBOW COMPUTING INC.

Low Resolution, Real Time Space Battle.

PRICE: 15.00

TITLE: GALACTIC BATTLE
PUBLISHED BY: PROG
MEMORY: 16K, INTEGER BASIC

ATTACK the ENEMY STARBASE with your SPACESHIP! The base is protected by a number of space pods which, like the starbase can fire at you. The STAR-

BASE is also protected by shields. For your offense, you have both PHASERS and PHOTON TORPEDOES.

PRICE: TAPE, 9.95

TITLE: GALACTIC EMPIRES
PUBLISHED BY: POWERSOFT INC.
MEMORY: 16K, APPLESOFT

Galactic Empires pits 1 to 20 players against each other and the computer in a struggle for control of up to 40 star systems. The players compete by sending out fleets of ships to capture neutral planets and to attack the colonies of other players. The victor is the player who controls the most stars by game's end.

PRICE: TAPE, 9.95

TITLE: GAME PACK
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K, APPLESOFT, INTEGER

Contains 3 programs: BLACK BOX — It's a game in which you'll attempt to find through logic or luck, the positions of several hidden balls in a playing field. The field is a square 8 x 8 units to a side. The field has a single row of squares that borders it. This special section is used by you to deduct clues about the location of the hidden balls. AVALANCHE — Speed and skill required to catch the avalanche of falling bricks. SPOT SEARCH — The object of this game is to guess the position of a colored spot that is displayed on the screen.

PRICE: Tape, $9.95

TITLE: GAME PACK-1
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K, APPLESOFT, INTEGER

Contains 3 programs: NIMBOT — This is the game of Nim done in high-resolution graphics. The object of the game is that whoever has to kill the last robot, loses. ITCHI — Itchi is a special worm who likes to solve mazes. Your task is to give him a maze to solve. TARGET — A game of calculation. Hit the moving target by deflecting your shot off the walls of the playing fields or from straight on.

PRICE: TAPE, 9.95

TITLE: GAME PLAYING WITH BASIC
PUBLISHED BY: HAYDEN BOOK COMPANY
MEMORY: 16K

Three cassettes featuring 27 recreational, educational, and skills programs. Tape 1 consists of 10 programs. Tape 2 consists of 9 programs. Tape 3 consists of 8 programs.

PRICE: TAPE, 9.95 EACH

TITLE: GAME PLAYING WITH BASIC I
PUBLISHED BY: HAYDEN BOOK COMPANY

Features 10 recreational and educaional programs: Coin Toss, Coin by Coin, Coin Toss with Summary, Rolling One Dice, Seven/Eleven, Mouse in a Maze, a

Random Walk, Battle of the Numbers, Dealing a POKER Hand, and Tic-Tac-Toe.
PRICE: CASSETTE, 9.95

TITLE: GAME PLAYING WITH BASIC II
PUBLISHED BY: HAYDEN BOOK COMPANY

Features 10 programs: Knight's Tour, Guess the number, Prime Numbers I, Prime Number 2, Chinese Remainder Theorem, Perfect Numbers, Armstrong Numbers.
PRICE: CASSETTE, 9.95

TITLE: GAMES PACK I and GAMES PACK II
PUBLISHED BY: DYNACOMP, INC.
GAMES PACK I contains BLACKJACK, LUNAR LANDER, CRAPS, HORSERACE, SWITCH and more.
GAMES PACK II contains CRAZY EIGHTS, JOTTO, ACEY-DUCEY, LIFE, WUMPUS and more.
Why pay $5.95 or more per program when you can buy a DYNACOMP collection for
PRICE: $9.95 each postpaid

TITLE: GENIUS
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE
In each round of this game, you are given a potpouri of 5 trivia questions to answer as quickly as possible. Any final score above 400 will merit a rating of genuis, but watch out! There's a 25 point penalty for each wrong answer. The quiz includes questions about movies, sports, TV, literature, general knowledge, and of course, computers.

TITLE: GERONIMO
PUBLISHED BY: MAD HATTER SOFTWARE
This is a HIRES real-time game for the Apple II, with sound and using the paddles. You are a parachutest jumping from a light plane and trying to hit a target on the ground. You control your parachute and when you jump.
16K.
PRICE: $7.95

TITLE: GOLF
PUBLISHED BY: INSTANT SOFTWARE
MEMORY: 20K
Without leaving the comfort of your chair, you can enjoy a computerized 18 holes of golf with a complete choice of clubs and shooting angles. You need never cancel this game because of rain. One or two players can enjoy this game.
PRICE: TAPE, 7.95

TITLE: GOLF II
PUBLISHED BY: MAD HATTER SOFTWARE
This game features a nine hole golf course with full graphic displays of each hole. You choose which club you are going to use and the amount of swing. You can also ask the caddy for help. Sound is also included in this program.
16K.
PRICE: $9.95

TITLE: GOMOKU
PUBLISHED BY: SOFTAPE

This is the ancient game of five in a row. You play against the computer, which has three levels of excellence. A Hi-Res board using SCREEN MACHINE gives the game the beauty and style of chess.
APPLESOFT or INTEGER loads. 16K.

PRICE: TAPE $14.95

TITLE: GRAPHICS EDITOR
PUBLISHED BY: SUBLOGIC
MEMORY: 16K

Uses Apple's powerful shape routines to assemble vector tables and store shapes into files for recall and interaction.

PRICE: 13.95

TITLE: GRAPPLE
PUBLISHED BY: POWERSOFT INC.
MEMORY: 16K, APPLESOFT

A game of territorial conquest for 2 to 6 players. Object of game — players compete for control of territories, striving to increase their army strength and defeat their opponents while trying to prevent being totally annihilated by natural disasters.

PRICE: Tape, $9.95

TITLE: THE GREAT CHASE
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

He moves fast, but so can you.

PRICE: TAPE or DISK, 19.95

TITLE: GUIDED MISSLES
PUBLISHED BY: PROGRAMMA
MEMORY: 16K, INGEGER BASIC

GUIDED MISSLES is a real time high resolution shooting gallery simulation for two players. It is written entirely in machine language. The play is extremely fast. It is as good as most real arcade video games. You won't believe it.

PRICE: TAPE, 15.95

TITLE: GUNFIGHT
PUBLISHED BY: PROGRAMMA
MEMORY: 8K, INTEGER BASIC

You're back in the old west about to meet 10 gunfighters from DODGE CITY. Being the good guy, you may only fire when the gunfighter starts to draw ... CAUTION!!!! Each gunfighter is faster than his predecessor. Lo-res graphics and sound.

PRICE: TAPE, 6.95

TITLE: HEXPAWN
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
It's chess, but with all pawn players.
PRICE: TAPE or DISK, 14.95

TITLE: HI-RES BASEBALL
PUBLISHED BY: PROGRAMMA INTERNATIONAL
BASEBALL is an animated simulation of a standard, major league baseball game for two players. The scoreboard is in the lower left of the screen. In the lower right corner is the "throw pointer" for directing a throw. Written in machine language, BASEBALL's action is quick and smooth, making it the finest simulation of its kind.
ASSEMBLY. 16K.
PRICE: TAPE $15.95

TITLE: HIRES BOXING
PUBLISHED BY: PROGRAMMA

BOXING is one of the most enjoyable games that has been created for the APPLE II COMPUTER. The players have control of both the back and forth and swinging motions of thei boxers. The play is fast and furious and has all the excitement of a real boxing match.
PRICE: 15.95

TITLE: HIRES CHESS TUTOR
PUBLISHED BY: CRITERION SYSTEMS GAMES

This program teaches the complete novice all of the basic movements of the pieces (certain advanced concepts such as en passant are not taught). It displays the chess board and pieces in hires graphics. The student selects which piece he wishes to learn and the program demonstrates possible movements of that piece on the board. Integer Basic
PRICE: 9.95

TITLE: HOCKEY
PUBLISHED BY: MAD HATTER SOFTWARE
This is a real-time action game for two players using the Apple II's game paddles. It features a graphics display of the playing field, goals, forwards and goalies and sound.
16K.
PRICE: $7.95

TITLE: HOSTAGE
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
The outcome of this game depends on how successfully you negotiate with the captors. 8K.
PRICE: 19.95

TITLE: HUNT THE WUMPUS
PUBLISHED BY: WISE OWL WORKSHOP
MEMORY: 16K

A classic computer game.
Hunt the horrible Wumpus in a maze of caves. Hazards abound but there is a chance to kill the Wumpus before he wakes up and eats you. You can hear the Wumpus snore, hear the Giant Bat squeek and other sounds.

PRICE: 9.95

TITLE: HEAD ON
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER

WARNING: this game is highly addictive!
• Fantastic arcade quality game • Boots directly on basic or pascal systems • Runs on any configuration Apple II with 32K.
PRICE: $24.95

TITLE: HEARTS 1.5
PUBLISHED BY: DYNACOMP, INC.

An exciting and entertaining computer version of this popular card game. Hearts is a trick-oriented game in which the purpose is not to take any hearts or the queen of spades. Play against two computer opponents who are armed with hard-to-beat playing strategies.
PRICE: $14.95 postpaid

TITLE: HYPER HEAD ON
PUBLISHED BY: BRODERBUND SOFTWARD

This fast action hi-res game is the best we have ever seen and attracted large crowds at the San Francisco Computer Faire when it was first demonstrated in this country!! Object is to maneuver your race car at high speed over a series of tracks while a computer-controlled kamikaze tries to ram you head on!
PRICE: $24.95 Cassette APPLE II, with APPLESOFT or INTEGER, 32K

TITLE: INFINITY
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

The depths of time and space test your skill.

PRICE: DISK or TAPE, 14.95

TITLE: INSTANT LIBRARY
PUBLISHED BY: SOFTAPE

START YOUR APPLE LIBRARY with 8 tapes of programs that utilize the special abilities of the Apple II. Each tape contains 1 to 9 programs. Load any one of the tapes into your computer and a menu will appear on the screen automatically. Select a program and the computer will execute it instantly. Included in the price of the Instant Library is a trial membership in the Softape Software Exchange, one of the largest clubs in the country. The 8 tapes contain the following programs: ADVANCED DRAGON MAZE, DIGITAL DERBY, SAUCER WAR, 3-D PLOT, ETCH A SKETCH, STAR, OTHELLO, MASTERMIND, SEVEN, APPLEODIAN, AWARI, TOWERS OF HANOI, HEX PAWN, BLACKJACK, HYPER-LIFE, 8 GRAPHICS DEMOS, PROJECT UFO, CLEAN SWEEP, STAR WARS, LUNAR LANDER.
PRICE: $39.95 Cassette $39.95 ST112D Diskette

TITLE: INTERACTIVE BASEBALL
PUBLISHED BY: CHIRICHEIIA
MEMORY: 16K

An interactive Baseball Game that uses color graphics extensively. Play a 7 or 9 inning game alone or against a friend, (it will handle extra innings). Has sound effects with men running bases. Base stealing and pitching are under player control. Double plays and picking off of base runners under software control. Keeps track of team runs, innings, balls and strikes, outs, hits, has strikeouts and walks, and uses paddle inputs to interact with the program. Includes: User manual with complete documentation. Plus a listing of key line numbers with an explanation of their purpose within the program.

PRICE: CASSETTE, 12.50

TITLE: INTERCEPT
PUBLISHED BY: CONTRIBUTED PROGRAMS

You say it's early evening and you want to just sit back and relax? Saturday afternoon, and the living is easy? Late at night and you've just made your cocoa? THEN DON'T PLAY INTERCEPT! BUT, if you've had your shots, and you're not afraid of uncrated Bleedes, then have we got a game for you. Intercept, the game that pits you, the person, against APPLE, the phantasmagorical game machine. An 11 year old will have some difficulty; a 23 year old will find it highly troublesome; if you're over 30, we recommend Whist. Just flex your flibberty digits and plow right in. Soon you'll be racking up points at a rate that will make your head spin. With a little practice, you can be Intercept champion of your neighborhood, your community, your entire block. The object of the game is to accumulate points by intercepting colored blocks as they appear at random on the playing field. Integer Basic 12K.

PRICE: $4.00 Cassette $6.00 Diskette

TITLE: INVASION OF PHOBOS
PUBLISHED BY: AUTOMATED SIMULATIONS
MEMORY: 16 BASIC

Control the newest ship of the United States of Earth and attempt to attack and destroy the 11th, fighter base one of mars moons phobos. Includes sound effects and display of the action.

PRICE: 9.95

TITLE: INVASION/ROCKET PILOT
PUBLISHED BY: PROGRAMMER SOFTWARE EXCHANGE
MEMORY: APPLE II CASSETTE

Interactive Demo - Program leads you through question and answer session in demonstration of interactive programming.

PRICE: 5.00

TITLE: JUNGLE ISLAND
PUBLISHED BY: ALLADIN
MEMORY: 8K

You're shipwrecked in a raging storm at sea. The only one left alive, miraculously you awaken to find yourself on the beach of a seemingly deserted jungle island.

Without food, water or supplies of any kind, you must find your way to safety, fighting nature, the elements and whatever surprises lie in wait for you along the jungle trails ahead.

The computer will be your eyes and ears as you begin to explore the jungle island and the mysteries in store for you with this captivating program in the Aladdin Adventure™ series.
Three paths lie in front of you as you leave the security of the beach.
Which one to take???
Which one leads to safety???
Which one will you choose???
PRICE: TAPE, 14.95

TITLE: JUPITER EXPRESS
PUBLISHED BY: SOFTAPE
Pilot your own spacecraft, dodging the asteroids between Jupiter and Mars. 9 levels of difficulty. Exciting Hi-Res graphic space simulation.
ASSEMBLY. 16K
PRICE: TAPE $9.95

TITLE: JURY
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
You select the members of a jury and participate in the trial. 8-32K.
PRICE: $9.95

TITLE: JUMP OUT/SHOOTING STARS
MEMORY: 8K, INTEGER BASIC
HARDWARE: LIGHT PEN REQUIRED
JUMP OUT is a lores HI-Q game. Use your light pen to select a piece to be jumped and the jumping piece. Try to end with only one peg left on the board.
PRICE: TAPE, 6.95

TITLE: KING
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K APPLESOFT ROM
King is an intellectual challenge of resource managment. The inherent difficulty of this task frequently results in an abbreviated reign. The questions you have to resolve are: What is a Rallod? Where is Setats detinu? What is land worth? How much does the average resident eat? How much should be planted? How many acres should be sold? What about population control. How is the population maintained? There is only one way to find out the answere to these questions and still more. . .
PRICE: 6.95

TITLE: KING
PUBLISHED BY: PROGRAMMAR SOFTWARE EXCHANGE
MEMORY: 16K
You rule an entire country. Use your head or lose it.
PRICE: 10.00 CASSETTE

TITLE: KNIGHTS
PUBLISHED BY: PROGRESSIVE SOFTWARE
Keyboard game. Using Chess Knight moves, change KNIGHTS to their matching half board. Also, on same diskette, SOLITARE — Old European peg game. Finish with last peg in center.
PRICE: $19.95

TITLE: LASER BOMB
PUBLISHED BY:
MEMORY: 16K

Two space ships laser bomb a not so fast defenseless city. Scoring, lots of explosions. 1 or 2 man paddle game.

PRICE: 9.95

TITLE: LASER TANK BATTLE
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Version of the arcade game. Two tanks battle it out. 8K.
PRICE: $9.95

TITLE: LASER TURRET
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K

Laser Turret is a color graphics game in which you control a movable gun turret, which can fire laser blasts at an enemy force shield. The game can be played by one or two players and with four levels of difficulty.

PRICE: 9.95

TITLE: LEAP FROG
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K

Leap frog is a game of logic in which you move purple frogs to the right and green frogs to the left side of the screen by jumping. The frogs are drawn in Hires graphics and the challenge is to move all the frogs correctly in 25 moves.

PRICE: 6.95

TITLE: LEGACY
PUBLISHED BY: COOK COMPUTER COMPANY

On first exposure this is an exciting mystery game. The user must discover and use the built-in multiplication tables. The game then becomes an enjoyable form of timed drill or multiplication facts.

PRICE: 7.95

TITLE: LUNAR LANDER
PUBLISHED BY: ALADDIN
MEMORY: 8K

You are in a controlled descent, just seconds away from your first landing on the cold forbidding surface of the moon.
Dangers that lie ahead in this one-of-a-klind program in the Aladdin Simulation series: a fuel level fast approaching zero ... sheer faced cliffs and rough terrain below ... choosing the correct landing pattern and rate of descent.
The landing area you chose is flat, but surrounding it are skyscrapers-tall craters formed eons ago by meteors crashing to the moon's surface. Will they beckon you to join them???
It's up to you. With sweaty hands on the controls and beating heart, only you can make your first landing on the moon a safe one. Can you meet the challenge???

PRICE: TAPE, 14.95

TITLE: LUNAR LANDER
PUBLISHED BY: COMPUTER COMPONENTS, INC.

This game uses the game paddles to maneuver a rocket ship from one landing site to an adjacent one. The game uses high resolution color graphics and sound for added realism.

PRICE: 5.00

TITLE: LUNAR LANDER
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER

A great hires LUNAR LANDER game. Land softly and watch the astronaut plant his flag and then take off. This program is a good example of animation using the HIRES GENERATOR by PROGRAMMA.

PRICE: TAPE, 9.95

R/T LUNAR LANDER
PUBLISHED BY: MAD HATTER SOFTWARE

This is a REAL-TIME LUNAR LANDER simulation, featuring, movement in four directions. If you don't act fast enough - you'll crash! Uses interesting grahic display.
16K.

PRICE: $7.95

TITLE: LUNARSCAPE
MEMORY: 8K, INTEGER BASIC

LUNARSCAPE is an interesting version of the popular computer game LUNAR LANDER. In LUNARSCAPE the player controls the vertical thrust and horizontal thrust.

PRICE: TAPE, 6.95

TITLE: MASTERMIND
PUBLISHED BY: PROGRAMMER SOFTWARE EXCHANGE
MEMORY: 16K

Game of pure mind control. Master the concept. Similar to bagels but with lo graphics and colors. Computer game.

TITLE: MATCHES
PUBLISHED BY: PROGRAMMER SOFTWARE

Classic game where you play against computer to see who takes the last match.

PRICE: CASSETTE, 5.00

TITLE: MATCHWITS
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K

Matchwits is a game much like television's concentration. The board contains the letters A-Z and the number 1-4. One or two players pick two letter or number combinations. Two shapes then appear behind them. If they match, 1000 points are added to the players score, and you get another turn. There are three levels of play.
R.J. Nitto

PRICE: 9.95

TITLE: MICROCHESS
PUBLISHED BY:

Now you can play chess against the computer! Microchess is a machine language program available in APPLE, PET and TRS-80 versions. It displays a graphic chessboard and even flashes the piece on which the computer narrows its attention prior to making its move. This program offers three levels of play to challenge all players from beginners to real chess enthusiasts.
16K.
PRICE: $19.95

TITLE: MICROCHESS
PUBLISHED BY: PERSONAL SOFTWARE, INC.
MEMORY: 16K

The industry's first "Gold" cassette. This best selling chess program is a nearly perfect chess opponent for the advanced enthusiast or total novice.
Microchess is ready whenever you are to play on any of eight degrees of difficulty (three on the TRS-80). And Microchess is a good sport-quiet in victory, quiet in defeat, and none of the hums, thumps, scratches, groans and tapping you get from human opponents.
You can switch sides at any point in the game, and change difficulty levels, too. Choose from 32 book openings, or start each game from scratch. The computer will not permit illegal moves, so this is the ideal practice set for the beginner. But at the higher levels of difficulty - you'd better be sharp.
Complete documentation and instructions, top quality cassette and guarantee, great human interface. If you play chess, challenge Microchess! If you don't play yet, you're in for a treat.
PRICE: DISK, 24.95

TITLE: MICROCHESS
PUBLISHED BY: RAINBOW COMPUTING INC.

Graphic Display. Beginning to intermediate.
PRICE: 15.00

TITLE: MICROGAMMON
PUBLISHED BY: SOFTTAPE

Learn, practice and inhance your backgammon ability with a true competitor.
PRICE: 14.95

TITLE: MICROGAMMA
PUBLISHED BY: SOFTAPE

Pit your mental skill and luck against that of the APPLE II with this computer implemented version of the popular board game backgammon. All the moves are displayed on the video screen along with the board layout and pieces.
INTEGER. 16K.
PRICE: TAPE $14.95

TITLE: MICRO LEAGUE BASEBALL
PUBLISHED BY: ARTHUR WELLS
MEMORY: 48K APPLESOFT or INTEGER
HARDWARE: DISK
Finally. . .The Hi-res Baseball that's as good as the Apple!
8 different pitches, 6 different swings
3-D effect on fly balls
Player controlled fielding and throwing
Vocal umpire
Complete electronic score board
Beautiful stadium in full color
PRICE: 24.95

TITLE: MIDWAY
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
Defend the fleet against a vicious attack squadron.
PRICE: $7.95

TITLE: MIMIC
PUBLISHED BY: INSTANT SOFTWARE
MEMORY: 24K
Test your memory and reflexes with the five different versions of this game. You must match the sequence and location of signals displayed by your Apple. This one-player program includes optional sound effects.
PRICE: TAPE, 7.95

TITLE: MISSILE-ANTI-MISSILE
PUBLISHED BY: PROGRESS
MEMORY: 16K
Missile-Anti-Missile is a high resolution game. The viewer will see a target appear on the screen, followed by a 3-dimensional digital drawing of the United States. Then a small submarine appears. The submarine is controlled by hostile forces (upon pressing the space bar) which launches a pre-emptive nuclear strike upon the United States (controlled by paddle no. 1). At the time that the missile is fired from the submarine, the United States launches its own anti-missile (the anti-missile is controlled by paddle No. 0). There are many levels of play depending upon the speed.
PRICE: TAPE, 9.95

TITLE: MISSION IMPOSSIBLE ADVENTURE
PUBLISHED BY: ADVENTURE INTERNATIONAL
MEMORY: 24K
MISSION IMPOSSIBLE ADVENTURE—Good Morning, Your mission is to....and so it starts, Will you be able to complete your mission in time? Or is the world's first automated nuclear reactor doomed? This one's well named, it's hard, there is no magic but plenty of suspense. Good luck....
PRICE: Tape, $14.95

TITLE: MARLOC'S TOWER
PUBLISHED BY: AUTOMATED SIMULATIONS
MEMORY: 32K APPLE II, APPLESOFT

Microquest No. 2. Like the Datestones except the goal is to kill an evil wizard, Morloc the warlock, in the minimum amount of time. Morloc wanders about a 30 room tower which is also inhabited by his minions. Brian Hammerhand must explore the tower and find Morloc and do away with him, something virtually impossible to do without using the magical treasures scattered about the tower. Morloc summons monsters and casts fireballs. At the last moment he teleports out of Brian's grasp.

PRICE: TAPE, 14.95

TITLE: MOTOCROSS
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER BASIC

MOTOCROSS is a hires game of motorcycle racing. It uses both the paddles to control speed and the switches to do wheelies. The game can be played by either one or two players.

PRICE: TAPE, 9.95

TITLE: MOUSE HOLE
PUBLISHED BY: PROGRAMMER
MEMORY: 8K, INTEGER BASIC

MOUSE HOLE is a lores graphics game. The object is to find the hole where the mouse is hidden. There are 361 holes and you have to work against the clock.

PRICE: TAPE, 6.95

TITLE: MOUSE IN THE MAZE
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

He learns and he will find his way out every time.

PRICE: TAPE or DISK, 14.95

TITLE: MYSTERY FUN HOUSE
PUBLISHED BY: ADVENTURE INTERNATIONAL
MEMORY: 24K

MYSTERY FUN HOUSE — Can you find your way completely thru the strangest Fun House in existence, or will you always be kicked out when the park closes ...

PRICE: Tape, $14.95

TITLE: NETWORK
PUBLISHED BY: EDU-WARE
MEMORY: 48K
HARDWARE: DISK AND PADDLES REQUIRED

The thrill and frustration of being the head of Television Programming for a giant network is experienced by two players as they compete with each other and the computer. You bid on new shows, schedule them, adjust to weekly ratings, and then dump losers and try to recover from your mistakes at the end of the thirteen week "sweep". Paddle control provides real-time control over the rapidly changing situation.

PRICE: 19.95

TITLE: NIGHTMARE #6
PUBLISHED BY: CONTRIBUTED PROGRAMS

Suddenly a feeling of panic overcomes you ... reality is suspended. Rules of nature shatter and chaos reigns supreme. The abyss lurks and sanity is tenuous at best!. 32K.

PRICE: $4.00 Cassette $6.00 ASB111D Diskette

TITLE: NIGHTMARE #6
PUBLISHED BY: PROGRAMMER SOFTWARE EXCHANGE
MEMORY: 16K

Suddenly a feeling of panic overcomes you. . .reality is suspended. Rules of nature shatter and chaos reigns supreme. The abyss lurks and sanity is tenuous at best. The object of the game is to figure out what is the object of the game.

PRICE: 2.00

TITLE: OTHELLO
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

You've seen it elsewhere, but on the Apple it's simply great.

PRICE: TAPE or DISK 14.95

TITLE: OTHELLO
PUBLISHED BY: PROGRAMMER SOFTWARE EXCHANGE
MEMORY: 26K

A two player game of skill like checkers or chess. Has been called REVERSI. The object is to capture the most squares. A game of quick and disasterous reverses.

PRICE: 2.00

TITLE: OTHELLO
PUBLISHED BY: PROGRESS
MEMORY: 16K

Othello is a game played by either one or two players that is similar in strategy to chess. Once a piece is played the color may be reversed many times, and there are also sudden reverse of luck. You can win with a single move. The computer does all the work in keeping the details and flipping the pieces.

PRICE: TAPE, 9.95

TITLE: PACIFICA
PUBLISHED BY: RAINBOW COMPUTING, INC.
MEMORY: 16K INTEGER

Find the floating island of Pacifica, rescue the beautiful princess, and recover the enchanted crown. An excellent adventure involving magic spells and encounters with demons.

PRICE: TAPE $9.99

TITLE: PARROT
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Parrot is similar to Dueling Digits, but you try to remember sequences of letters and tones instead. Two skill levels.

TITLE: PADDLE FUN
PUBLISHED BY: INSTANT SOFTWARE

This new Apple disk package requires a steady eye and a quick hand at the game paddles! We've included four different games to challenge and amuse you. They include:
INVADERS — You must destroy an invading fleet of 55 flying saucers while dodging the carpet of bombs they drop. Keep a wary eye for the mother ship directing the incursion. Your bomb shelters will help you — for a while. Our version of a well known arcade game! Requires Applesoft in ROM.
HOWITZER — This is a one or two person game in which you must fire upon another howitzer position. This program is written in HIGH-RESOLUTION graphics using different terrain and wind conditions each round to make this a demanding game. The difficulty level can be altered to suit the ability of the players. Requires Applesoft in ROM.
SPACE WARS — This program has three parts: (1) Two flying saucers meet in laser combat — for two players, (2) two saucers compete to see which can shoot out the most stars — for two players, and (3) one saucer shoots the stars in order to get a higher rank — for one player only. Requires Applesoft.
GOLF — Whether you win or lose, you're bound to have fun on our 18 hole Apple golf course. Choose your club and your direction and hope to avoid the sand-traps. Losing too many strokes in the water hazards? You can always increase your handicap. Get off the tee and onto the green with Apple Golf. One of its nicest features is you'll never need to cancel a golf date due to rain. Requires Applesoft.
PRICE: $19.95

TITLE: PHASOR ZAP
PUBLISHED BY: PROGRAMMA INTERNATIONAL

A fast moving game where you try to shoot down as many enemy fighters as you can. You must destroy the enemy before he reaches the halfway point in hyperspace or else he shoots back. You risk annihilation as your energy level begins to fall. The enemy moves across the screen as you move your sights to shoot. Real time; Hi-Res graphics.
INTEGER. 16K.
PRICE: TAPE $15.95

TITLE: PINBALL
PUBLISHED BY: PROGRAMMER SOFTWARE EXCHANGE
MEMORY: 16K

Graphic pinball from Apple Software Bank. Has one moving flipper and lots of up and down, side to side moves. Paddle game.
PRICE: 2.00

TITLE: PIRATES
PUBLISHED BY: PROGRAMMAR
MEMORY: 8K INTEGER

The object is to sink the Jolly Roger (skull & crossbones). But, beware. . .Sir Edwin Denner is the captian of the Jolly Roger and he never misses. You have to choose the right amount of powder to blow the sails off one at a time before you can fire the fatal shot. Since Sir Edwin never misses, you have to sink the ship before he blows the base of your fortress away. Unbelievable pomp and circumstance. Complete with music and medals.
PRICE: 9.95

TITLE: POKENO
PUBLISHED BY: RAINBOW COMPUTING
MEMORY: 48K, RAM, INTEGER BASIC

Pokeno is a black and white high resolution, modern version of a popular parlor game sometimes called Poker Squares.

A complete deck of 52 Hi-res cards is first shuffled and then dealt to the player one at a time for a total of 25 cards. After a card is dealt, it must be put into one of the 25 squares. Then you are asked for the column, type A, B, C, D, or E and push 'return'. When asked for a row, type 1, 2, 3, 4, or 5 and push 'return' again. For example, coordinate column A, row 1, will put the card in the upper left square.

The object is to make as high a score as possible, counting each row and column as a poker hand and scoring as follows:

Royal Straight Flush (10, J, Q, K, A in one suit)	50
Straight Flush (sequence in one suit)	30
Four of a Kind	16
Straight (sequence, eg. 3, 4, 5, 6, 7)	12
Full House (2 and 3 of a kind)	10
Three of a Kind	6
Flush (all of one suit)	5
Two Pairs	3
One Pair	1

The skill is involved in picking the right spot for each card. Note that in this game, hands are ranked by their relative difficulty. For example, trying for a straight and failing may leave you with zero points in that column, thus the reward for making it is higher than a full house or flush (where the odds are more in your favor of either getting some points or completing the hand). Cards need not be in order. For example, if in row 1 you have 3, 7, 4, 6, and a 5, it still counts as a straight.

After entering the last card, just sit back and watch the program total each row, then each column, and finally your total score.

PRICE: TAPE, 12.95
DISK 17.95

TITLE: POKER SLOT MACHINE/HI-RES PLAYING CARDS
PUBLISHED BY: RAINBOW COMPUTING

Enjoy this simulation of the poker slot machine in Vegas. Win money by getting the best hand possible. Also includes instructions and demo program on how to use these Hi-Res cards in your own programs.

APPLESOFT/ASSEMBLY. 32K.

PRICE: DISK $17.95

TITLE: POT O'GOLD I
PUBLISHED BY: RAINBOW
MEMORY: 16K, TAPE INTEGER
32K, DIST INTEGER

Program Number	DESCRIPTION	Program Number	DESCRIPTION
0.	Menu	25.	T.V. Tennis
1.	Biorhythm	26.	Midway
2.	Acey Ducey	27.	Sub Command
3.	Eliza	28.	Star Wars #2
4.	Hurkle	29.	Walls

5.	Bit Bin	30.	Bach W/Graphics
6.	Master MInd	31.	Pinball
7.	Sink the Ship	32.	Scramble
8.	Awari	33.	Timer
9.	Horserace	34.	The Worm
10.	Hexpawn	35.	Hires Fastplot
11.	Dragons Maze	36.	Save the World
12.	Color Math	37.	Torpedo Run
13.	Star Wars #1	38.	Wordcross
14.	Robot Chase	39.	Harmonics
15.	Battle Ship	40.	Hyperbola
16.	The Drip	41.	Star Spangled Banner
17.	Digital Clock	42.	Giant Typewriter
18.	Sea Wars	43.	Base Conversion
19.	Maze Runner	44.	Qubic
20.	Saucer Wars	45.	Keyboard Organ
21.	Color Sketch	46.	Tower of Hanoi
22.	Poet	47.	Slot Machine Simulator
23.	Sevens	48.	Depth Charge
24.	Othello	49.	Chase

PRICE: TAPE $49.00
DISK $54.00

TITLE: POT O' GOLD II
PUBLISHED BY: RAINBOW
MEMORY: 16K

Our first POT O' GOLD was so popular that we are now offering a second, all new POT O'GOLD. What a great way to build a program library - 49 exciting action games, demo programs, and challenging logic games for only $1.00 each! Highlights include MOON LANDER, a challenging Hi-Res game, SOLITARE, everyone's favorite card game, with graphics, and ERIC'S STAR WARS, a great space shoot-out by our own Eric Waller.

Program Number	Side 1 DESCRIPTION	Program Number	Side 2 DESCRIPTION
1.	Bounding Ball	26.	Moon Mission
2.	Follow Me	27.	Stone Game
3.	Fox and Hounds	28.	Sea Bomber
4.	Stay Afloat	29.	Nightmare #6
5.	Horseshoes	30.	Matches
6.	Super Quiz	31.	Bowling
7.	Ping Pong	32.	Taxman
8.	Tic Tac Toe	33.	Twonky
9.	Moon Lander	34.	Eye Guess
10.	Shooting Stars	35.	Vibrating Spring
11.	Runaround	36.	Connect 5
12.	Solitare	37.	Music with Graphics
13.	Depth Charge	38.	Advanced Pinball
14.	Elipse	39.	Skeet Shoot
15.	Addition Drill	40.	Curves
16.	Darts	41.	Catch
17.	Nines	42.	Advanced Dragon Maze
18.	Hangman	43.	Secret Mission
19.	Stock Market	44.	Sneak
20.	Target Shoot	45.	Blackout
21.	Brain Busters	46.	Hammurabi
22.	Baseball	47.	One Check
23.	Decisions	48.	Eric's Star Wars

24.	Airport	49.	Rebound
25.	Lissajous 3-D	50.	Shooting Gallery

PRICE: TAPE $49.00
DISK $54.00

TITLE: PRO GOLF
PUBLISHED BY: SOTFAPE

Now even on rainy days you can improve your game. With the APPLE II as your caddy, you choose your own clubs and irons on each shot on this 18-hole course. Every fairway has its own challenging sandtraps and water hazards, but distractions disappear when the screen displays only the green as you begin to putt. Your Apple-caddy keeps track of your score. Have fun, and remember - keep your eye on the ball!
INTEGER. 16K.

PRICE: TAPE $12.95

TITLE: RACER
PUBLISHED BY: BRODERBUND SOFTWARE

A dizzying high-speed drive on a tortuous track. By Lou Haehn. Apple II, with APPLESOFT or INTEGER, 16K
PRICE: $12.95 Cassette

TITLE: RACER
PUBLISHED BY: SOFTAPE

Slip behind the wheel, ignite the engine and get ready for a high speed race. Racer uses Hires and paddles to simulate Grand Prix excitement. Requires 24K.
PRICE $12.95 Cassette

TITLE: RADAR INTERCEPTOR
PUBLISHED BY: POWERSOFT
MEMORY: 16K, APPLESOFT IN RAM

Using Applesoft II (RAM version only) and the Apple II high resolution graphics the author modifies Applesoft II and changes the Apple's CRT display into a simulation of a radar scope. The object of this game is to intercept an incoming airborne enemy vehicle represented on the screen as a "blip" with a game paddle controlled missile represented by a smaller "blip" on the screen. If interception does not occur the enemy will penetrate the user's defenses. The program keeps a tally of both the enemy penetration of the defenses as well as the interception and destruction of enemy vehicles. As the player of the game becomes more proficient in destroying the enemy vehicles the enemy will in turn become more evasive than before.

PRICE: Tape, $9.95

TITLE: RETREAT
PUBLISHED BY: PROGRAMMAR
MEMORY: 8K, INTEGER BASIC

RETREAT is a fast color graphics game that uses both paddles. The object is to steer your token through the obstacles before your opponent does. If you make a mistake you must retreat to the very start of the track.

PRICE: TAPE, 6.95

TITLE: ROADRACE/SPACEWAR
PUBLISHED BY: WISE OWL
MEMORY: 16K INTEGER BASIC

Roadrace is a color graphics game of driving skill. It is your job as driver to keep your race car on the track without running off the road. You can select course difficulty and use the switch as a brake. Space War, on the same tape, is really three games in one; Shoot the Saucer, Shoot the Stars and Solitaire Shoot the Stars. This game uses the game paddles and color graphics. Both games help teach eye and hand coordination.

PRICE: 9.95

TITLE: ROCKET INTERCEPT
PUBLISHED BY: SOFTTAPE
MEMORY: 16K APPLE II

Graphics paddle game of skill and chance. Your space fighters defend multi-bases from 100 computer directoed attacks. 30 speeds, aried explosions, sound, color, scoring. . .and more.

PRICE: 9.95

TITLE: ROAD RALLYE
PUBLISHED BY: MICRO-WAVE DISTRIBUTING INC.

A stimulating hires auto race game with five spectacular full screen tracks.

PRICE: $14.95

TITLE: ROCKET PILOT
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Rocket Pilot is an advanced real time take off and landing game. The object is to maneuver your spaceship successfully over a mountain to the landing area on the other side. The game paddles control your horizontal and vertical thrusters. In addition to the graphics display of the rocket, the screen also shows your current velocity, time, and remaining fuel. Earn a rating of "rocket pilot" if you negotiate the trip without running out of fuel or crashing into the mountain.

TITLE: ROCKET PILOT
PUBLISHED BY: CRITERION SYSTEMS
MEMORY: 16K

This is a real-time simulation, in two degrees of freedon of a lunar landing. Once each second, the program calculates and prints out: vertical speed, vertical position, horizontal speed, horizontal position relative to landing site, direction of horizontal thrust, vertical scale and seconds to landing. The two game paddles are used to control vertical and horizontal thrust; the direction of horizontal thrust can be changed by a keystroke. Three vertical ranges are defined. A display in low Resolution graphics shows the current position of the ship, and as the ship goes through the lower altitude of each vertical range, the vertical scale changes, allowing a "magnified" view of position. Accompanying sound effects vary with speed of fall and can be turned on and off.

PRICE: 7.95

TITLE: ROCKET PILOT
PUBLISHED BY: PROGRESS
MEMORY: 16K
This is an exciting game where you are on a planet taking off with your rocket ship, trying to fly over a mountain. The simulation of the rocket blasters actually accelerates you up, and if you are not careful, you will run out of sky. The contour of the land changes each time you play the game.
PRICE: 9.95

TITLE: ROCKET PILOT
PUBLISHED BY: POWERSOFT
MEMORY: 16K, INTEGER
Rocket Pilot is a high resolution graphics game. The object of the game is to fly a rocket over the mountain and land in the valley using the time and fuel alloted.
PRICE: TAPE, 9.95

TITLE: ROCKET PILOT/SAUCER INVASION
PUBLISHED BY: MAD HATTER SOFTWARE
In ROCKET PILOT, fly your ship over a mountain to a safe landing on the other side. You have control over your ship's movement in four directions. In SAUCER INVASION you try to destroy attacking flying saucers with missiles. You control when they fire and from where. Both games make use of the game paddles and sound.
16K.
PRICE: $12.95

TITLE: ROCKS, PAPER, SCISSORS
PUBLISHED BY: AUTOMATED SIMULATION
MEMORY: 8K BASIC
A version of the old childrens game with the Apple playing you. The Apple keeps score, picks its own choice of play, and will show its choice in graphics. Sound effects are also included. This program has been tested with children. It will keep them amused for hours.
PRICE: 7.95

TITLE: SAHARA WARRIORS
PUBLISHED BY: IS
MEMORY: 8K and INTEGER BASIC
Now you can enjoy all the gritty realism of desert warfare with the Sahara Warriors package.
Commando-You must send your commands to trap a German general and cut him off from his troops. You'll have the choice of two levels of difficulty.
French Foreign Legion-The battalions of the French Foreign Legion are in a race with the Arabs. Which side will ger its battablions into the oasis in the

shortest time? You and a friend can find out. This game has four different version, which even include an occasional sandstorm.
PRICE: TAPE, 7.95

TITLE: SARGON - CHESS
PUBLISHED BY: HAYDEN
MEMORY: 16K

SARGON: A Computer Chess Program (Spracklens). The program that won first prize at the 1978 West Coast Computer Faire Chess Tournament! The user can play black or white, and can select the depth of look-ahead from one to six plays. Moves are entered in algebraic chess notation. You can even set up board positions for chess problems.

PRICE: TAPE, 19.95

TITLE: SARGON II - CHESS
PUBLISHED BY: HAYDEN
MEMORY: 16K

SARGON II (Spracklens) ... an evaluation routine that enabled it to beat the giants! ... unequaled in the end game ..." It is able to push passed pawns toward queening, play a strong end game, and range in deep play levels at end game without user direction. Has 7 levels of play, and levels 0-3 play in tournament time. It has a randomized opening book for all 7 levels of play through 3 down, left and right. A special hint mode is included at all levels of play but 0 that will suggest a good but not necessarily the next best move you can make.

PRICE: DISK, 34.95
TAPE, 29.95

TITLE: SAUCER INVASION
PUBLISHED BY: POWERSOFT

Saucer Invasion is a high resolution graphics game. The object of the game is to destroy as many alien flying saucers in the time allotted using the ground to air missiles.

PRICE: 9.95

TITLE: SAUCER INVASION
PUBLISHED BY: COMPUTER COMPONENTS

This game uses a game paddle to position an anti-ballastic missile beneath an invading saucer, and the button to fire it. The game uses high resolution color graphics and sound for added realism.

PRICE: 5.00

TITLE: SAUCER INVASION
PUBLISHED BY: PROGRESS
MEMORY: 16K

You are being invaded by a flying saucer and you can shoot at it with your missile and control the position with your paddle.

PRICE: TAPE, 9.95

TITLE: SAUCER WAR
PUBLISHED BY: COMPRES
MEMORY: 32K, APPLESOFT ROM or RAM 48K, RAM
This Hi-res two player game makes use of the Apples's paddles and buttons. Each player has a saucer, and tries to destroy his opponent.
PRICE: TAPE, 15.95

TITLE: SAUCER WARS
PUBLISHED BY: GEORGE EARL

It's the one-on-one in a 21st century battle far from earth.
PRICE: TAPE, 8.50

TITLE: SAVE THE WORLD
PUBLISHED BY: GEORGE EARL

It's in your hands. You'll need all your skill.
PRICE: TAPE, 8.50

TITLE: SCI FI GENERATOR
PUBLISHED BY: CRITERION SYSTEMS GAMES
MEMORY: 16K
Do all horror story plots seem similar to you? Weel, this program demonstrates that even a dumb machine can come up with original plots by manipulating certain key "catch" phrases. Demonstrates the essential similarity of all horror stories. Includes prime No. Generator.
PRICE: 4.95

TITLE: SCI-FI SAMPLER
PUBLISHED BY: MAD HATTER SOFTWARE
There are three games in this one program. The first is Star Monster, a hidden monster game. The second is a Lunar Lander simulation, where you can enter the starting values or have the computer do it for you. The third is Space Battle, a space war program where you fight a battle with lasers against an attacking enemy spaceship. All of these games include instructions as part of the program along with graphic displays.
16K.
PRICE: $7.95

TITLE: SCRAMBLE
PUBLISHED BY: COOK COMPUTER COMPANY
MEMORY 16K
This program present a scrambled word for the user to unscramble. The user may choose between version which are timed or not timed. The program is documented with remark statements for changing or sorting the word list. Color graphics add to the fun.
PRICE: 4.95

TITLE: SEVENS
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
The famous card game for up to four players.
PRICE: TAPE or DISK, 14.95

TITLE: SHOOTING STARS
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
Not another Star Wars ripoff, but just good fun.
PRICE: TAPE or DISK, 14.95

TITLE: THE SHY MOUSE
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
He's in the maze, but can you find him?
PRICE: DISK or TAPE, 14.95

TITLE: SIDE SHOWS
PUBLISHED BY: MUSE
MEMORY: 8K
HARDWARE: INTEGER BASIC

A collection of six exciting games selected for their originality, ease of operation and imaginative use of the Apple. Includes the Apple Tree, Safecracker, Pip Shoot, Minelayer, Blockade and Quadripang. In the APPLE TREE two players use the paddles to catch randomly falling apples. In BLOCKADE and MINELAYER try to surround your opponent with a moving wall or mine field. PIP SHOOT can be played by two or more and the object is to shoot down as many "pips" as possible. QUADRIPANG is four wall pong with varying ball speed and sound. Use the paddle carefully to be first to open the safe in SAFECRACKER.
PRICE: TAPE, 12.95

TITLE: SINK THAT SHIP
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
War at sea with realism only possible on the Apple.
PRICE: TAPE or DISK, 14.95

TITLE: SINK THE SHIP
PUBLISHED BY: CONTRIBUTED PROGRAMS
Is your hand steady? Your eye sharp? Do you have delusions of being a Norden Bombsight? Try this and see. As your swift aircraft flys over the boundless sea, a ship makes its way across the waves. Press the bomb release and watch the cannister of death descend on the hapless vessel, only to splash harmlessly in the ocean - or perhaps score a direct hit. Drop the bomb down the funnel for a bonus. 32K.
PRICE: $4.00 Cassette $6.00 ASB115D Diskette

TITLE: SINK THE SUB
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
Torpedoes depth charge --- who will win?
PRICE: TAPE or DISK, 14.95

TITLE: SKEETSHOOT
PUBLISHED BY: ON-LINE SYSTEMS

A simulation in HI-RES graphics of the sport of skeetshooting. 48K.

PRICE: $19.95

TITLE: SKUNK
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Skunk is a two player dice game in which the object is to accumulate 100 points before your opponent. On each turn you may roll the dice or "pass." You roll the dice by turning a game paddle, and the value of the roll is added to your total score. If you roll a 1, you lose all the points accumulated on that turn. If you roll snake eyes (two 1's), your total score goes to 0.

TITLE: SLALOM
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Have fun skiing without getting cold! Slalom is a downhill exercise in which you weave in and out of the flags on a championship slalom course. Game paddles control the speed and motion of the skier as you go for Olympic gold. But don't knock down any flags or go off the mountain. Swiss hospitals don't take Master Charge!

TITLE: SPEEDWAY
PUBLISHED BY: PROGRAMMER
MEMORY: 16K, INTEGER BASIC

Race down the speedway in your Hi-res formula race car. With the game paddles and buttons you steer, shift gears and control the car's speed.

PRICE: TAPE, 15.95

TITLE: SPACE II
PUBLISHED BY: EDU-WARE
MEMORY: 48K
HARDWARE: DISK

SPACE II contains Characters, Chaman (your character launches a career as a religious practitioner attempting to build a cult following), and Psychodelia (gives clues to your character's makeup through experiences with mind altering drugs ... in a safe, computer environment).

PRICE: DISK, 24.95

TITLE: SPACE GAMES
PUBLISHED BY: CALIFORNIA COMPUTER SERVICES

1. Rocket Pilot - Advanced Lunar Lander simulation in which you guide your space craft over the mountain to a safe landing on the opposite side.
2. Saucer Invasion - You protect the earth by shooting down the alien invasion fleet with your missile launcher.
3. Star Wars - Line up the tie fighther in your sights and fire before they get away.
4. Dynamic Bouncer - A full color graphics demo program for your Apple which fills the screen with colored walls that appear and disappear at random while a ball boundes around within.

PRICE: 7.95

TITLE: SPACE GAMES - 1
PUBLISHED BY: CREATIVE COMPUTING

Four color-graphic programs for your apple, including ROCKET PILOT an advanced lunar lander simulation in which you guide your spacecraft over a mountain to a safe landing on the opposite side. IN SAUCER INVASION, you protect the earth by shooting down the alien invasion fleet with your missile launcher. In STAR WARS, you line up the Tie fighters in your sights and fire before they get away. DYNAMIC BOUNCER is a color-graphics demonstration program for your Apple which fills the screen with colored walls that appear and disappear at random, while a ball bounces around within.
16K.
PRICE: $7.95

TITLE: SPACE INTRUDERS
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Computer version of the famous arcade game. Use with Soundware music box for best effect. 8-32K.
PRICE: $9.95

TITLE: SPACE MAZE
PUBLISHED BY: COMPUTER COMPONENTS, INC.

This program consists of a maze and a space ship. The object is to pilot the space ship through the maze, using the Apple game paddles. A great program for developing coordination. This game uses color high resolution graphics and sounds of added realism.
PRICE: 10.00

TITLE: SPACE MAZE
PUBLISHED BY: PROGRESS
MEMORY: 16K

This game puts you in a maze with a rocket ship, and you try to "steer" out of it with your paddles or joystick. It's a real challenge. It is doen in high resolution graphics in color.
PRICE: TAPE, 9.95

TITLE: SPACE MAZE
PUBLISHED BY: POWERSHIFT
MEMORY: 16K, INTEGER

Space Maze is a high resolution graphics game. The object of the game is to maneuver a space craft through a maze as fast as the player can without touching the walls of the maze.
PRICE: Tape, $9.95

TITLE: SPACE WAR
PUBLISHED BY: AUTOMATED SIMULATIONS
MEMORY: 16K BASIC

You fly the starship Apple to attack the renegade spaceship which has been terrorizing the galaxy. Has sound effects and display of all the attack sequences. Include documentation for possible improvements or changes.
PRICE: 9.95

TITLE: SPACE WAR
PUBLISHED BY: RAINBOW
MEMORY: APPLE 16K INTEGER
APPLE 24K INTEGER

Your space capsule versus the computer's saucer in an effort to destroy him before he destroys you. Start without a sun, and as you imporve, add the sun and it's gravity for a full blast orbital battle. Hi-Res graphics.

PRICE: TAPE $10.00
DISK $17.00

TITLE: SPACE WARS
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER BASIC
This is a super-fast action, Hi-res game. Two players use paddles to manuver their ships into position in order to fire upon one another.
PRICE: TAPE, 9.95

TITLE: SOLITAIRE
PUBLISHED BY: PROGRES
MEMORY: 16K
Old European peg game, played by one. Similar to Chinese Checkers. Object is to finish with last peg in the center.
PRICE: TAPE, 9.95

TITLE: SOLITAIRE POKER
PUBLISHED BY: SOFTAPE
SOLITAIRE POKER is the ultimate poker machine! It simulates the poker machines that line the Las Vegas strip. Practice your poker ability with Hi-Res playing cards. SOLITAIRE POKER is a sure winner!
INTEGER or APPLESOFT LOAD. 32K.
PRICE: TAPE $12.95

TITLE: SOLO RACE
PUBLISHED BY: SYSTEM DESIGN LAB
MEMORY: 16K
A very exciting and challenging Low Resolution auto race game where you drive a race car over curvy roads and around obstacles. You are allowed only 5 wrecks at which time you must have accumulated as many points as possible. This challenging game is superbly written and is sure to give hours of fun to all ages.
PRICE: TAPE, 11.95
DISK, 15.95

TITLE: STAR CRUISER
PUBLISHED BY: SIRIUS SOFTWARE
STAR CRUISER sold over 2000 copies in the first 3 weeks and is still selling strong. Super Invader ... eat your heart out. STAR CURISER is a fast action arcade game that can be played by ages 3 and up and remains a challenge to all.
PRICE: $24.95

TITLE: STAR DODGER
PUBLISHED BY: PROGRAMMAR
MEMORY: 8K, INTEGER BASIC

Try to steer your ship past a series of randomly generated stars. This game uses the game paddles to steer and the button to control your speed.
PRICE: TAPE, 6.95

TITLE: STARFIGHT
PUBLISHED BY: BILL HINDORFF

A two-player dogfight. (machine level, reg. 16K)
PRICE: $9.95

TITLE: STAR TREK
PUBLISHED BY: APPLE COMPUTERS
MEMORY: 16K

Includes Star Wars.
PRICE: 15.00

TITLE: STARTREK 3.2
PUBLISHED BY: DYNACOMP, INC.

This is the classic Startrek simulation, but with several new features. For example, the Klingons now shoot at the Enterprise without warning while also attacking starbases in other quadrants. The Klingons also attack with both light and heavy cruisers and move when shot at! The situation is hectic when the Enterprise is besieged by three heavy cruisers and starbase S.O.S. is received! The Klingons get even!
PRICE: $9.95 postpaid

TITLE: STAR VOYAGER
PUBLISHED BY: PROGRAMMAR
MEMORY: 32K, INTEGER BASIC

You are the commander of a spacecraft and your mission is to get through the outer defenses of a star base, destroy the base, and land back on earth safely.
PRICE: TAPE, 15.95

TITLE: STAR WAR
PUBLISHED BY: POWERSOFT

Star War is a high resolution graphics game. The object of the game is to destroy the enemy space craft in the time allotted using the ammunition at the player's disposal.
PRICE: 9.95

TITLE: STAR WARS
PUBLISHED BY: APPLE COMPUTERS

Includes Star Trek.
PRICE: 15.00

TITLE: STAR WARS
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Use the game paddles to get the enemy TIE fighters within your crosshairs, then FIRE!! The object is to destroy as many enemy ships as possible in 90 seconds as they perform evasive maneuvers to avoid your fire. Lasers, exploding enemy fighters, and action sounds put you in the middle of the fierce battle against the Imperial Empire!

TITLE: STARWARS
PUBLISHED BY: PROGRESS
MEMORY: 16K

The original and best star wars game, written by Bob Bishop. You fire upon the tie fighter after aligning the fighter in your crosshairs. This is a high resolution game in color that uses the paddles.

PRICE: TAPE, 9.95

TITLE: SIMULATING SIMULATIONS
PUBLISHED BY: POWER SOFT

Here is a set of ten original simulation games. The games are fun and the 64 page paperback book which accompanies the cassette, giving instructions, flowcharts, program listings, and suggested modifications, makes stimulating simulations an educational tool too. The simulations are: Art Auction, Monster Chase, Lost Treasure, Gone Fishing, Space Fight, Forest Fire, Nautical Navigation, Business Management, Rare Birds, and Diamond Thief.
16K.

PRICE: $14.95

TITLE: STRANGE ODYSSEY
PUBLISHED BY: ADVENTURE INTER
MEMORY: 24K

STRANGE ODYSSEY — Marooned at the edge of the galaxy, you've stumbled on the ruins of an ancient alien civilization complete with fabulous treasures and unearthly technologies. Can you collect the treasures and return or will you end up MAROONED FOREVER ...

PRICE: Tape, $14.95

TITLE: STRATITO LOGIC
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

A game of logic and strategy which will drive you mad.

PRICE: TAPE or DISK, 19.95

TITLE: STRATOLASER
PUBLISHED BY: PROGRAMMAR
MEMORY: 32K, APPLESOFT ROM or RAM

As commander of a remote outpost at the edge of the galactic frontier, your duty is to sweep the quadrant for klunkon starships.

PRICE: TAPE, 15.95

TITLE: STUNT CYCLE
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER BASIC

This is a real-time action game that tests your reactions and skill. To achieve a high overall score, you must, while jumping busses, race your motorcycle against the clock.

PRICE: TAPE, 15.95

TITLE: SUB CHASER
PUBLISHED BY: POWERSOFT
MEMORY: 16K, INTEGER

In this game, you are the captain of a small destroyer roving the Atlantic ... While out on patrol, sonar reports submarine activity. Armed with fifteen depth charges and raw courage, it is up to you to sink as many subs as you can. But beware!! The subs defend themselves with deadly missiles.

PRICE: Tape, $7.95

TITLE: SUB COMMAND
PUBLISHED BY: PROGRAMMER
MEMORY: 8K, INTEGER BASIC

Sink as many enemy ships as you can by firing torpedoes from a submarine, while avoiding their depth charges. The game is in Lo-res and uses the paddles.

PRICE: TAPE, 6.95

TITLE: SUB DETECT
PUBLISHED BY: PROGRAMMER
MEMORY: 8K, INTEGER BASIC

The object of this game is to hit the enemy ship with explosives by choosing its X, Y coordinates and depth.

PRICE: TAPE, 6.95

TITLE: SUBMARINE ATTACK
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Your depth charges against their torpedoes. 8K.
PRICE: $9.95

TITLE: SUB VIEW
PUBLISHED BY: PROGRAMMER
MEMORY: 8K, INTEGER BASIC

You are the Captain of a submarine in charge of policing waters for enemy ships which are disguised as friendlies. Object -- seek and destroy enemy.

PRICE: TAPE, 9.95

TITLE: SUPER LIFE
PUBLISHED BY: COMPRESS
MEMORY: 32K, DOS, APPLESOFT ROM

An extended form of the game of LIFE including life, death, growth and differentiation.

PRICE: 50.00

TITLE: SUPER OTHELLO
PUBLISHED BY: PROGRAMMA INTERNATIONAL

For years people have spent many entertaining hours playing Reversi, the age-old game of logic and foresight. Now we bring you this game in the guise of SUPER OTHELLO! Sandwich the computer's markers to capture them and convert them over to your side. Object of the game is to get the most markers. Hi-Res graphics - written entirely in machine language for maximum speed. ASSEMBLY. 16K.

PRICE: TAPE $15.95

TITLE: SUPER SEA WAR
PUBLISHED BY: MICRO-WARE DISTRIBUTING INC.
Hires graphics and unique sound add to this computer enhanced version of battleship. 3 levels of play incl. Super Salvo with missles.
PRICE: $13.65

TITLE: SUPER STARTREK
PUBLIHSED BY: UNITED SOFTWARE OF AMERICA
Real-time version of an all-time favorite. 8-32K.
PRICE: $14.95

TITLE: SUPER REVERSI
PUBLISHED BY: PROGRAMMER
This is a super-fast Hi-res Reversi game that allows you to enter your moves via the forward and backward arrows. The computer shows you all of your legal moves for speed.
PRICE: 15.95

TITLE: SWARM
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
Defend the U.S. against an invasion of killer bees. Use everything from evasion tactics to nuclear weapons. 8-32K.
PRICE: $14.95

TITLE: SWARMS
PUBLISHED BY: POWERSOFT
MEMORY: 16K, INTEGER
Swarms is a low resolution graphics game. The game places the player in the position of defending the country against an invasion of killer bees. The operation of Swarms centers around an 'Attack Scan Map' of the U.S. and the Commands that can be used to combat the killer bees.
PRICE: TAPE, 14.95

TITLE: TANK
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
Destroy a powerful aggressor who is attacking your pillbox. 8K.
PRICE: $9.95

TITLE: TANK COMMAND
PUBLISHED BY: BRODERBUND SOFTWARE
Based on the strategic war-game program that tied up the nation-wide PLATO system in the mid-70's because all the computer buffs wanted to play it (although originally devised by a graduate student at a Big Ten University to study complex prabability systems), if you can think at least 4 moves ahead, then you may be a match for the computer. Fine action and sound effects and many different play options make this a best buy! For 1 or 2 players, with variable levels of difficulty.
PRICE: $9.95 Cassette APPLE II with APPLESOFT, 16K

TITLE: TANK WAR
PUBLISHED BY: MUSE
MEMORY: 16K
A state-of-the-art shootout for two players with dramatic sound and graphics. Players choose the style and size of their tank. Steer your tank with the game paddles to pursue and out-maneuver your opponent. Fire two types of missles to disable and destroy the enemy. Damage, speed and chosen tank size all interact for maximum interest.
PRICE: TAPE, 12.95

TITLE: TARGET SHOOT
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K BASIC
A game in integer basic. The object of this game is to fire a bullet from a moving gun through a window whose position changes with each shot. Skill level is adjustable from novice through expert. Includes 6502 Moog Synthesizer.
PRICE: 4.95

TITLE: TIC-TAC-TALKER
PUBLISHED BY: SOFTTAPE
MEMORY: 24K
Side A: Tic-Tac-Talker is the first in a series of Conversational Software. It contains voice recognition and response software to create an exciting new way to communicate with your Apple II Computer, i.e. hands off voice communication. Comes complete with a colorful 10-res dispaly of the game board.
Side B: Spectrum analysis uses voice recognition software to produce a histogram of audio frequency distribution. Great for study of audio phenomeno and voice recognition methods. Produces an eight band audio frequency analysis.
PRICE: 19.95

TITLE: TIME CLOCK
PUBLISHED BY: PROGRAMMAR
MEMORY: 8K, INTEGER BASIC
This is a real-time software clock dispiay with alarm. The program keeps track of the date, hours, minutes and seconds. The time is displayed in large numbers in Lo-res.
PRICE: TAPE, 6.95

TITLE: TORPEDO RUN
PUBLISHED BY: CDS-P
MEMORY: 16K
A game of war that goes deep.
PRICE: TAPE or DISK, 14.95

TITLE: TOWER OF HANOI
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
It looks easy, but but you can't do it in the fewest moves.
PRICE: TAPE or DISK, 14.95

TITLE: TOWERS OF HANOI
PUBLISHED BY: CONTRIBUTED PROGRAMS
This is a task of many names, as ancient as the mountains of Tibet or perhaps a little younger, and of truly cosmic significance. In mountain retreat the original towers sit, with shaven monks solemnly moving rings from one tower to another. The reports vary, but there are more than a dozen rings in all and when they have at last been moved from the first tower to the third, the world will end. In this version, if you move them all from the first tower to the third, the game will end. 32K.
PRICE: $4.00 Cassette $6.00 ASB113D Diskette

TITLE: TRANQUILITY BASE
PUBLISHED BY: BILL BUDGE
MEMORY: 32K
HARDWARE: DISK, APPLESOFT or INTEGER
A great hi-res lunar lander, just like the arcade game!
Landscape scrolling
Auto-zoom for landing site close-up
Player control of 360 craft rotation
Spectacular crashes
Always challenging. . .Improve your score as you improve your skill!
PRICE: 24.95

TITLE: TRAPSHOOT
PUBLISHED BY: ON-LINE SYSTEMS
A simulation in HI-RES graphics of the sport of trapshooting. 48K.
PRICE: $14.95

TITLE: TUNNEL VISION
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
Elaborate maze game with detailed graphics. 8-32K.
PRICE: $14.95

TITLE: U F O
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER BASIC
Use your one laser to blast UFO's out of the sky. They remain friendly until you attack them so shoot wisely!
PRICE: TAPE, 9.95

TITLE: ULTRA BLOCKADE
PUBLISHED BY: PS
MEMORY: 16K, INTEGER
The standard against which other versions have to be compared. Enjoy Blockade's superb combination of fast action (don't be the one who crashes) and strategy (the key is accessible open space-maximize your while mini-

mizing you oponent's). Play against another person or the computer. New high resolution graphics lets you see how you filled in an area-or use reversibility to review a game in slow motion (or at top speed, if that's your style). This is a game that you won't soon get bored with!
PRICE: TAPE, 9.95

TITLE: VALDEZ
PUBLISHED BY: DYNACOMP, INC.
A simulation of supertanker navigation in the Price William Sound and Valdez Narrows. The program uses an extensive 256X256 element radar map and employs physical models of ship response and tidal patterns. Chart your own course through ship and iceberg traffic. Any standard terminal may be used for display.
PRICE: $14.95 postpaid

TITLE: WAMPUS HUNT
PUBLISHED BY: PS
Wampus Hunt is a low resolution graphics game. The Wampus colony inhabits a burrow of twenty caves. Each cave has three tunnels leading to other caves. The objective is to descend into the burrow and hunt the Wampi!
PRICE: 9.95

TITLE: WAR AT SEA
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
They're all there, but who will win the classic sea battle?
PRICE: TAPE or DISK 14.95

TITLE: WARLORDS
PUBLISHED BY: PERSONAL SOFTWARE
It is the Dark Ages in the ancient kingdon of Nerd, and all is chaos. King Melvin died without an heir and the country has fallen into the hands of four powerful and vile WARLORDS. A power struggle is taking place to see who will emerge as the new King. You and the other players are these WARLORDS and, as you brood in your castle, you will have to decie what combination of military might and skillful diplomacy will lead you to victory. It would be foolhardy to wage war against all others simultaneously, yet. . .will the alliance you make stand the test of battle? Should you double-cross him before he screw you? And what of the serfs? You will have to tax them heavily to wage war but not to the point of plague and famine. Will your troops control the country-side or lay siege to the towns and capitals? Whoever said "War is Hell" never played WARLORDS.
PRICE: 12.00

TITLE: WIPE OFF
PUBLISHED BY: PROGRAMMER
MEMORY: 8K, INTEGER BASIC
A "BREAKOUT" type game. WIPEOFF lets you choose your colors and wipe off all the bricks that are spread out over the screen.
PRICE: TAPE, 6.95

TITLE: ZINTAR
PUBLISHED BY: EDU-WARE

A mind-expanding trip is created by Zintar's wisdon, mind-blowing graphics (color and b/w version included) and the inner brains of all who are willing to make the "journey". (ROM Applesoft required).
PRICE: DISK, 15.95

PARTY PAK: all 3 on one diskette 39.95

TITLE: 3-D DOCKING
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER BASIC
In this Hi-res game you are shown split screen view of an asteroid field. The object is to dock your ship in the docking platform without hitting any asteroids.
PRICE: TAPE, 15.95

TITLE: 23 BRICKS
PUBLISHED BY: CONTRIBUTED PROGRAMS
Tote those bales, lift those bricks, your Apple II is up to more tricks! Take one, two or three, then you'll see what your computer's response will be.
32K.
PRICE: $4.00 Cassette $6.00 ASB119D Diskette

TITLE: GRASSHOPPER GALLERY
PUBLISHED BY: VITAL INFORMATION
Welcome to the worlds most bizarre and crazy shooting gallery. Instead of shooting airplanes or ducks out of the sky, we went for the superior "Grasshopper". Just how good are you? How many can you shoot with your "lazer" gun?Remember those grasshoppers are scored by colors. Red - 10 points, Blue - 5 points, White -3, etc. Sounds simple you say!!! This could very likely replace the "space games". Color and sound enhance the entertainment of this game.
PRICE: $12.95

GAMBLING

Apple 21 ..... GB-1
Apple Casino GB-1
Beat The House GB-1
Blackjack GB-1
Black Jack Tutorial GB-1
Bridge Challenger GB-2
Bridge Partner GB-2
College Football GB-2
College Football GB-2
Craps GB-3
Gammon Gambler GB-3
Las Vegas Blackjack GB-3
Pro Football GB-3
Quarterhorse Race GB-4
Rainbow's Casino GB-4
Roulette GB-4
Turf Analysis GB-4
Vegas Computer GB-5
Win At The Races GB-5



TITLE: APPLE 21
PUBLISHED BY: SOFTTAPE
A Las Vegas blackjack game. One, two, or three players can challenge the dealer to win on the table. Four decks are used and each deck has a different back. This game keeps track of all your winnings and losses and gives you a balance when you leave the table. This game is constructed for ease of operation. Any player can quit or join at any time without disturbing the game. You can choose the table limit and maximum for your table. You can also change tables at any time. Don't worry, the house will 'loan' you money when your out.

PRICE: 9.95

TITLE: APPLE CASINO
PUBLISHED BY: POWERSOFT
MEMORY: 16K, INTEGER
Apple Casino is a low resolution graphics game. These games of chance may be played: Stars, Acey-Ducey, Slot Machine, and Black Hole.
PRICE: TAPE, 9.95

TITLE: BEAT THE HOUSE
PUBLISHED BY: G.R.T. CORP.
G/2's game application actually has 4 separate games on each tape. The first is Blackjack which duplicates Las Vegas Blackjack with true randomizing functions. As the player you may split, double down, take insurance, choose the number of players, and choose the number of decks of cards you wish to use. In addition, you choose your starting bank and each wager. The payoffs are realistic. Beat the House also offers "craps", "Roulette", and of course no casino would be complete without the one-armed bandit "slots".
PRICE: CASSETTE, 14.95

TITLE: BLACKJACK
PUBLISHED BY: GEORGE LEE
MEMORY: 16K
By George W. Lee
Features color graphics card display, dealer plus one or two players, choice of keyboard or paddle response, multiple sound effects, automatic score-keeping, random shuffle and card dealing. One or more players can be automatic. Periodic change of deck and card color.
PRICE: 10.00

TITLE: BLACK JACK TUTORIAL
PUBLISHED BY: POWERSOFT
MEMORY: 16K, INTEGER
This program is not just another black jack game. It has no graphics because it is not a game, but a learning tool. The object of this program is to teach the user how to play a winning game by eliminating poor play. Whenever the user makes a bad move the program will stop and show the proper moves. Most players face a disadvantage of between five and fifteen per cent because of poor play. The methods used here should give you a one percent disadvantage.
PRICE: TAPE, 9.95

TITLE: BRIDGE CHALLENGER
PUBLISHED BY: PERSONAL SOFTWARE
MEMORY: 16K

You and the dummy play four person contract bridge against the computer. The program will deal hands at random, or according to criteria for high card points. You can review tricks, swap side, or replay hands when the cards are known.

PRICE: 14.95

TITLE: BRIDGE PARTNER
PUBLISHED BY: PERSONAL SOFTWARE
MEMORY: 16K

Do you play out the bridge hands in the newspapers? Would you like to practice your bridge game without the bother of party nuts and iced tea? In short, are you a bridge player?

Bridge Partner, a standard notation contract bridge program, is just for you. Bridge partner is not a substitue for a good rubber played by four bridge lovers. But it is an exciting absorbing way to polish your abilities and strategy. You'll notice your game improving after honing your skills against Bridge Partner.

You and the dummy play against the computer in regular contract bridge. The computer will deal at least 10 million different hands. Or you can use the dealer subprogram to specify a criterion for high card points and Bridge Partner will deal Four new hands. Or you can deal your own hands. Enter the deal from the newspaper column, and test Bridge Partner.

You can save hands for replay later, go back and examine the previous trick, or swap sides and replay the deal.

Complete instructions plus an introduction to bridge are included in the manual.

PRICE: TAPE, 14.95

TITLE: COLLEGE FOOTBALL
PUBLISHED BY: SYSTEMS DESIGN LAB

COLLEGE FOOTBALL is very similar to the PRO FOOTBALL System above and has over 75 major college football teams. If you want to beat the spreads this year then give COLLEGE FOOTBALL a try. COLLEGE and PRO FOOTBALL are now available at your local dealer.

48K.

PRICE $21.95 Cassette $26.95 Disk

TITLE: COLLEGE FOOTBALL
PUBLISHED BY: SYSTEMS DESIGN LABS
MEMORY: 35K

Similar to the PRO FOOTBALL, COLLEGE FOOTBALL will give accurate point spread predictions within seconds on the APPLE II. This program was fully tested during the 1979 season and it consistently beat the experts. You may predict real or hypothetical games within seconds from data saved on cassette or disk. The data file requires only 10 to 15 minutes per week to maintain and will instantly give you a complete rundown of the season's activity. There are many special features such as Cassette Load and Save, Disk Load and Save, Team Review and Update, Summary of Predictions, and much more. COLLEGE FOOTBALL has over 78 Major College Football teams and a complete prior season

data file.
PRICE: TAPE, 21.95
DISK, 25.95

TITLE: CRAPS
PUBLISHED BY: ALLADIN
MEMORY: 8K
Lady luck sits at your side and whispers in your ear, "Try your luck one more time. Just one more time. . ." The big money's on the table. . .All eyes in the house are on you. . .And the dice are in your hands. . .And you Throw . . .
You watch the dice on the screen before your eyes in the exciting, heart-pounding game of "Craps"™, the first release in the "Las Vegas"™ series from Aladdin.
Will the temptress smile on you one more time? Or will she throw you "snake eyes"???
PRICE: TAPE, 14.95

TITLE: GAMMON GAMBLER
PUBLISHED BY: PERSONAL SOFTWARE
MEMORY: 16K
Backgammon is easy to lear and fun to play. But the odds, strategies and subleties of this intriguing game make it a classic of limitless challenge.
Gammon Gambler plays by standard U.S. tournament rules, using advanced artificial intelligence techniques. A great way to learn or polish your game, because Gammon Gambler checks moves for legality, lets you back up and correct your move, and optionally displays the numbers of the points. Backgammon rules are included in the manual.
Gammon Gambler is one of the few back gammon computer games to employ the doubling cube to make betting more exciting. And the Gambler keeps a running total of the point score from game to game, for tournament style play. You move by entering the starting location of the stone. The computer moves the piece to its destination with a flashing visual aid. You can stop a game at any point and begin a new match without reloading the program.
Gammon Gambler provides ten levels of skill, from beginner to expert. High resolution graphics show the board, points, stones, and scores clearly. This advanced machine language and BASIC program will be a much used addition to your software library.
PRICE: DISK, 24.95
TAPE, 19.95

TITLE: LAS VEGAS BLACKJACK
PUBLISHED BY: GEORGE LEE

Blackjack, by George W. Lee. The computer deals for one or two players. Major features are: color low resoltion graphics, sound effects and cummulative scoring.
PRICE: 10.00

TITLE: PRO FOOTBALL
PUBLISHED BY: SYSTEMS DESIGN LAB
Never before has there been a program that can predict such unbelievably accurate pointspreads with the APPLE II. This program was fully tested during the

1978 season and it consistently beat the experts. You may predict real or hypothetical games within seconds from data saved on cassette or disk. The data file requires only 10 minutes per week to maintain and will instantly give you a complete rundown of the season's activity. PRO FOOTBALL has many special features such as Cassette Load and Save. Disk Load and Save, Team Review and Update, Summary of Predictions, and much more. Each program includes a complete prior season Data File.
32K.
PRICE: $21.95 Cassette $26.95 Disk

TITLE: QUARTERHORSE RACE
PUBLISHED BY: PROGRAMMA
MEMORY: 16K, INTEGER BASIC
This program allows you and your friends to bet on the horses. There are five horses with different odds. Take a chance on a horse with large odds and win big, or play it safe with low odds. This program takes full advantage of the APPLE II's music and lores animation capabilities.
PRICE: TAPE, 6.95

TITLE: RAINBOW'S CASINO
PUBLISHED BY: RAINBOW
MEMORY: APPLE 16K
APPLE 32K

A combination of gambling games. Save your money! Don't go to Vegas. These 9 programs will turn your Apple into a gambling casino. Included are: Poker, Keno, Slot Machine, Roulette, Blackjack, Craps, Horserace, and some That have not even hit the casino floor yet. All are ">LOAD>RUN".

PRICE: TAPE $19.95
DISK $24.95

TITLE: ROULETTE
PUBLISHED BY: CREATIVE
MEMORY: 16K
The wheel spins and your fortune is on the line.
PRICE: TAPE or DISK, 21.50

TITLE: TURF ANALYSIS
PUBLISHED BY: SDL
MEMORY: 16K
Take the guesswork out of handicapping with this new and easy way to handicap horse racing on APPLE II. This program provides incredibly accurate predictions through the use of Multiple Regression and you don't have to know statistics to use it. You select the variables and enter your data and the program quickly does the rest. If on a rare occasion you make a mistake, don't worry, the program has a data correction section to take care of it. You may use as many variables and as much data as you like, you're only limited by the available memory of your computer. TURF ANALYSIS has been fully tested and more often than not, it will beat the experts.
PRICE: TAPE, 21.95
DISK, 25.95

TITLE: VEGAS COMPUTER
PUBLISHED BY: CREATIVE
MEMORY: 16K

A very lively slot machine game.

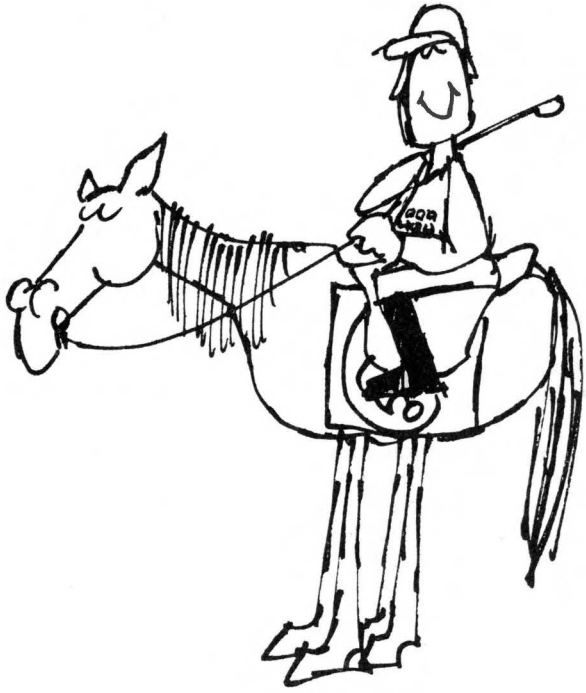
PRICE: DISK or TAPE, 24.95

TITLE: WIN AT THE RACES
PUBLISHED BY: SYSTEMS DESIGN LAB

WIN AT THE RACES is a NEW thoroughbred handicapping program that employs the formulas of a currently popular book whose author has done extensive research into the methods of thoroughbred handicapping. In each race, this program generates the probability and the probable betting odds of each horse and the results are listed in descending probability order. Since this program provides optional hardcopy printout, you may take your computer listing to the track and compare the track betting odds with your own. This system has been used by thousands of handicappers with outstanding results. If you're a serious thoroughbred handicapper then this program is an ABSOLUTE MUST. Program is now available at your local dealer or directly from SYSTEMS DESIGN LAB ... BUT ORDER EARLY!

32K.

PRICE $34.95 Cassette $39.95 Disk



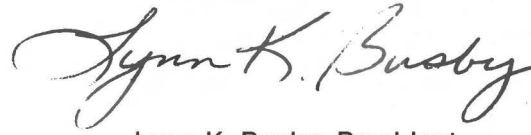
GRAPHICS

The Apple has brought computer graphics into everyday life. Graphics are now commonplace in business, education, research, and entertainment applications of personal computers.

Computer Station is proud to have taken a place in bringing low cost hardcopy graphics to Apple users. The sophistication of the high resolution graphics of the Apple II has set an example for the rest of the industry for state of the art computing. Having the capability to use graphics on a screen was magic enough for awhile but then the desire arose to be able to "dump" the screen to a piece of paper that could be studied, filed, passed on for review, etc. Printer companies saw the need and desire for hardcopy graphics and started incorporating the ability to do graphics in the hardware they were producing. Computer Station married the Apple to these printers with the appropriate software drivers -the result being many users who enjoy the magic of today's technology at a fraction of yesterday's cost.

I am especially pleased and proud to be involved with the development of products that make personal computing more fun and practical. I watch with awe when the Apple Brains (Computer Station's development team) are at work.

Respectfully,



Lynn K. Busby, President
Computer Stations, Inc.

GRAPHICS

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Anadex (Modle 9501) Graphics Software GR-1
Ana 1 (Analysis 1) GR-1
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TITLE: APPLE WORLD
PUBLISHED BY: UNITED SOFTWARE

APPLE WORLD turns your Apple into a sophisticated graphics system capable of creating animated three-dimensional color images, projecting them in true perspective on the screen, rotate them, move them closer, further away, and many other exciting and imaginative things.
Draws objects with 65,000 points per side.
A powerful screen-oriented text editor is included to facilitate image formation. This program was recently featured on Tom Snyder's Prime Time Saturday TV Show and is now available for sale.
APPLE WORLD's powerful editor is so easy to use that children will love it. You can now "sketch" your dream house, boat, car, or fantasy empire. Then view it as it would be seen from 10,000 feet, or you can ZOOM in until the screen is filled with a doorknob. You could then go inside and move from room to room examining furniture placement as your screen rotates within the room. Images or specific parts of images can easily be saved to disk or printer.
Does all this sound like science fiction? You won't think so after you have visited APPLE WORLD.

TITLE: ANADEX (MODEL 9501) GRAPHICS SOFTWARE
PUBLISHED BY: COMPUTER STATIONS, INC.

This software package has all of the features of our Enahnced Paper Tiger Graphics Software (Stock #7541) yielding hard copy results for the Anadex (Model #9501) printer. This assembly language Hi-Res dump for the Apple allows Anadex owners to discover and utilize the hidden talents of the graphics capabilities built into the 9501.
PRICE: $44.95

TITLE: ANA1 (ANALYSIS 1)

ANA1 (ANALYSIS 1) is a set of BASIC Programs which enables the user to perform analyses on any time series data. From 26 to 260 data points (5 years weekly, 1 year daily) can be plotted on the entire screen in one of 5 colors using Apples' High Resolution capabilities. The data can be transformed into different colored graphic representations called transforms. They are: user specified moving averages; a least squares linear fit (best straight line); filters for time magnitude, or percentage changes; and user created relationships between the data, a transform, or a constant using +, −, x, / operators. Colored lines can be drawn between graphic points. Graphic data values or their weekly dates of occurrence can be displayed in text on the screen. Any graph or text can be outputted to a users printer. The Grid Scale is automatically set to the range of the graphs or can be user changed. As many colored graphs as wanted can be plotted on the screen and cleared at any time. The user can code routines to operate on the data/transform data or create his own disk file data base. ANA1 commands can be used with his routines or data base. An Update program allows the user to easily update his file with current data. Data Base included: DJI weekly average, 1897 to date.
The ANA1 two letter user commands are: CA = Calculate, no graph. CG = Clear Graphs, leave Grids. CK = Checking out program, known data. CO = Color of next graph (red, green, violet, white, blue). CS = Clear Screen. DL = Draw Line between points. FI = Filter Data for time, magnitude, or percent change. FU = Data, transform, or constant Function with +, −, x, / operator. GD = Graphic mode, display all Graph Data on screen. GR = Graph data to screen. GS = Set Grid Scale. HE = Help, summary of any commands usage. LD = Load Data

from disk file from inputted date to memory. LG = Leave Graphs, automatic Grid rescaling. LO = Look, select a range of the LD data and GR: All commands can now be used on this range. LS = Least squares linear fit of the data. MA = Moving Average of the data. NS = No Scale, next graph on screen does not use Grid Scale. NT = No Trace. PR = User implimented Printer routine. TD = Text mode, display Text Data on screen. TI = Weekly time number to date or vice versa. TR = Text mode, display Text Data on screen. TI = Weekly time number to date or vice versa. TR = Trace. TS = Text Stop for number of lines outputted to screen when in TD. U1/U2 = User 1/2 implimented routines. VD = Values of Data outputted in text. VG = Values of Grid: low/high/delta. VT = Values of Transform outputted in text.

TITLE: APPLE DATA GRAPH
PUBLISHED BY: CONNECTICUT INFORMATION
MEMORY: 32K
HARDWARE: APPLESOFT ROM CARD
The program plots line graphs (as solid, or dotted, colored lines) and also plots scattergrams. Up to three 40-point, hi-resolution line-graphs or scattergrams may be drawn on the same co-ordinates, with the X and Y axes dimensioned. Curves or scattergrams may be saved to disc, and instantly recalled, if desired. If a screen printer is used, hard copy of graphs may be quickly obtained. Unskilled persons can easily operate the program.
The software is useful for graphing stocks, business reports and technical data.
Custom modifications to the above software are available on a negotiated basis.

TITLE: APPLE PLOT
PUBLISHED BY: APPLE COMPUTER
This is a fantastic product from Apple which magically converts numerical data into graphs for easy visual analysis. The information can be stored as a picture (on the high-resolution page) and printed out on any of a variety of printers. Input and editing of data is made easy; overlay allowed to compose graphs with multiple sets of data; may be interfaced with VISICALC(TM)
PRICE: $70.00

TITLE: APPLE TALKER
PUBLISHED BY: MAD HATTER SOFTWARE

-foreign alphabets, electronic symbols and even Hi-res playing cards, or, use the standard upper and lower case ASCII character set. The SCREEN MACHINE lets you redefine any keyboard character.
The SCREEN MACHINE options the saving of your character symbols to disk or tape for later use. Comes with Apple Hi-res routines in SOFTAPES prefix format included
24K.
PRICE: $19.95

TITLE: A RANDOM WALK
PUBLISHED BY: COMPUTER STATION
An extensive plotter program written in Applesoft Basic running on the Apple II.
PRICE: 34.95

TITLE: APPLEWRITER GRAPHICS
SILENTYPE
IDS 440G/445G
IDS 460G
PUBLISHED BY: COMPUTER STATION

With Applewriter Graphics, Apple users are now able to obtain hard copy of the character sets available with DOS Tool Kit. Our graphic driver is transparent when used in conjunction with Applewriter; all the familiar menus and options for editing and printing are still there, but now a variety of print "fonts" are available for the final draft. Try it, you'll love it!!!
Requires 3.3 DOS, DOS Tool Kit
PRICE: $34.95

TITLE: ARTIST'S DESIGNER
PUBLISHED BY: APPLE COMPUTER INC.

Set aside your paints, brushes, and canvas—now you can create works of art with your Apple II or II Plus computer! Artist's Designer is an exciting program that makes the most of your Apple's superb color graphics capabilities. Designed by an art instructor for computer art enthusiasts, it lets you "draw" and "paint" virtually any color graphics composition you wish, using your color monitor or color television screen as a "canvas."
Unlike more conventional graphics systems, Artist's Designer produces irregular shapes, curves, and other forms. And you can use colored dots to fill defined areas or to introduce textures. The five vibrant colors at your command—green, yellow, orange, violet, and red—can also be mixed with black or white to produce hundreds of color tints, mixtures, and shades. You can save your masterpieces, too. Up to 35 finished or in-progress compositions fit on a single storage diskette.
One of Artist's Designer's unique features redraws your designs, step-by-step—so you can "re-run" your process of creation and examine the artistic choices you made. This feature can likewise be used to experiment with "art animation," and exciting new performance art.
Artist's Designer also: has a special LINK feature that lets you "link together" designs from different storage files ... so you can build detailed compositions piece by piece; allows you to create "slideshows" of designs ... so you can make tutorial presentations for use in the classroom, office, or anywhere else; provides complete editing capabilities, including selective erase/redraw features ... so you save time by refining rather than redrawing compositions.
Artist's Designer uses menus and display prompting to give you the control you need as an artist. The program's main menu allows you to draw, edit, erase, or save compositions, and to choose or change their background colors.
Once you've made a selection from the main menu, sub-menus lets you focus specifically on what you want to do. Selecting DRAW, for instance, produces a sub-menu that allows you to draw either with blocks, dots, lines, curves, or semicircles. Other sub-menus let you redraw, edit, fill-in shapes with colors, and link designs stored in separate files.
Artist's Designer comes with 20 predrawn designs, which you can modify and use in your own compositions. A special "playback" feature will redraw successively—and continuously, if you like—up to 25 designs of your choosing. Artist's Designer's Playback feature lets you create a wide range of self-operating displays and exhibitions, without programming a line.
Artist's Designer is written in Apple Pascal. To use the program, you'll need: an Apple II or II Plus with 48K bytes RAM; the Apple Language System, a color video monitor or color television; an Apple Disk II with controller (16-sector PROMs).

With the Artist's Designer package, you'll receive: 1) Artist's Designer master diskette, containing modifiable demonstration designs and a disk initialization program; 2) instruction manual.
PRICE: $65.00

TITLE: BRIGHTERWRITER GRAPHICS SOFTWARE
PUBLISHED BY: COMPUTER STATIONS, INC.
This is the Graphics software written for the IP225 (BrighterWriter) printer. The Hi-Res dump for this printer is supported with the standard Apple parallel (or serial) interface card. BrighterWriter is a registered trademark of Integral Data Systems.
PRICE $34.95

TITLE: COLOR PACKAGE
PUBLISHED BY: SUBLOGIC
Includes a low resolution package of 15 programs and a package of 10 high resolution graphics programs.

PRICE: 10.95

TITLE: COMP-U-SKY
PUBLISHED BY: SCHARF SOFTWARE
Comp-U-Sky is a high resolution graphics program which enables the Apple user to locate, identify and provide information on stellar objects. It presents graphic displays for eight directions, as well as overhead, for any location on earth.
PRICE: $39.95

TITLE: CURVES
PUBLISHED BY: PROGRAMMER SOFTWARE EXCHANGE
Computer draws abstract art forms on the tube. It creates moire patterns and bold motion, and plays with a relationship of field and figure.
PRICE: 2.00

TITLE: DRAWING BOARD/KAL
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER BASIC
These are two program in one. DRAWING BOARD lets you draw in HIRES on the screen and save the picture. KALEIDOSCOPE produces pretty patterns at random or you can control the pattern yourself with the paddles.
PRICE: TAPE, 9.95

TITLE: ELECTRIC CRAYON
PUBLISHED BY: MUSE
MEMORY: 8K
Utilizes the 15 brilliant colors of low resolution graphics to turn your Apple into a radiant color display resembling a moving neon sign. Easily draw and animate color figures directly from the keyboard. Your drawings can be saved on tape and recalled later. Includes documentation.
PRICE: TAPE, 17.95

TITLE: ENHANCED PAPER TIGER GRAPHICS SOFTWARE
PUBLISHED BY: COMPUTER STATIONS, INC.

Software driver which allows user to dump the contents of the high resolution pages (options for Page 1 or Page 2) out to the IDS Paper Tiger (Model 440G) printer to obtain hard copy graphics. Diskette includes routines for all four standard Apple interface cards and the California Computer Systems parallel or asynchronous serial cards. Pictures are supplied on the diskette to practice "dumping". User may select parameters for each run or default to previous settings to speed up the process. Options During Print Out:
Print menu offers user definable print parameters. Once parameters are set, default feature can be used.
Dump either page 1 or page 2.
Regular (4 3/8 x 2 3/4") or enlarged (6 1/2 x 5 3/8") print out dimensions.
Picture print out at user selectable starting position (Left, Center, Right).
Normal or inverse print (picture or plot).
Extra easy loading of binary files (Hi-Res pictures).
Optional screen display or print.
Manual includes proper switch settings for graphics and instructions for saving Hi-Res Picture on disk.
This product replaces stock #7441 (Paper Tiger Graphics software) which is no longer available. Registered owners of stock #7441 may obtain the Enhanced package by forwarding their original copy of 7441 along with $10.00 (update fee) directly to Computer Station.
PRICE $44.95 Update from 7441 - $10.00

TITLE: ENHANCED TIGER GRAPHICS FOR THE IDS 460G
PUBLISHED BY: COMPUTER STATIONS, INC.

Software driver for the IDS 460G printer which utilizes the higher resolution features of the 460G. This product has all the human engineering that has been so widely appreciated with our Enhanced software for the 440G (stock #7541 above). Easy to use, versatile, and functional.
The IDS 460G uses a 24x9 dot matrix (per character) versus the 440G which uses a 7x7 dot matrix. Most dot matrix printers use a 5x7 matrix. The pictures below were dumped out to the 460G. The resolution speaks for itself.
PRICE: $44.95

TITLE: E-Z DRAW
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.

E-Z DRAW has been called the 'Poor Man's Graphics Tablet'. We like to think of it as a complete replacement. We can use the computer's power to draw and/or fill rectangles, ellipses, circles, triangles and parallelograms. E-Z Draw can place test *anywhere* on the screen in any of six colors, four type styles and in two sizes. It can also duplicate any portion of the screen quickly and easily. Freehand sketching, as well as point by point control over drawing and erasure, are easily accomplished.
You'll be able to see how a line will look and take it away without distrubing the background. Graphs, pictures or video images in normal binary files can be loaded, edited and then labeled with the powerful character generator.
It's easy to use since the instructions are right in the program and a written tutorial is included in the documentation.
48K.

TITLE: E-Z DRAW
PUBLISHED BY: SIRIUS SOFTWARE

E-Z DRAW has not just been updated to 3.3 DOS; we've done a complete rewrite. E-Z DRAW now includes the powerful HIGHER TEXT character generator written by Ron and Darrel Aldrich. With our new routines the fonts or any part of the picture can be flipped upside down, slanted right or left, rotated 90 or 180 degrees, mirrored, or any combination. Also the fonts or parts of the screen can be expanded in width or height, or compressed in height or width. You can mix portions of pictures together, or save only a portion of the screen on disk. Now fully keyboard controlled for better accuracy. Professional documentation and 20 different and imaginative type styles. Includes commands to print the hi-res screen on the Trendcom or Silentype printers. Updates are available for your existing stock for $8.00 per package. For your customers who already purchased E-Z DRAW 2.0 the update is only $10.00. This should encourage sales of your existing stock of version 2.0 should you wish not to update them. Customers must return their original disks to us for update.
PRICE: $49.95

TITLE: FONT EDITOR AND DISPLAY
PUBLISHED BY: POWERSOFT
MEMORY: 16K, APPLESOFT

The Font Editor and Display system gives the user a low-cost method of combining text and high resolution graphics material any where in the graphic window. With these easy-to-use programs the user can create, update, and maintain a font table of up to 255 character shapes.
PRICE: TAPE, 7.45
DISK, 12.45

TITLE: FUNCTION GRAPHS AND TRANSFORMATIONS
PUBLISHED BY: POWERSOFT
MEMORY: 16K, APPLESOFT

This program makes possible a visual, intuitive, and experimental approach to topics in algebra, trigonometry, and analytic geometry that many people find difficult to assimilate when presented in a primarily symbolic fashion. Perhaps more importantly, the program can be a vehicle for integrating the complementary intuitive and analytic/symbolic approaches; intuition and visualization, for example, can be used to help strengthen symbol manipulation skills.
The program uses the Apple II high resolution graphics capabilities to draw detailed graphs of functions which the user defines.
PRICE: TAPE, 14.95

TITLE: GRAPH IT
PUBLISHED BY: MICRO-WARE DISTRIBUTING INC.

A great hires graphing program that will make 3-d bar charts, pie charts, or line graphs. Just enter the data and the program will do the rest. (48K A-soft).
PRICE: $25.00

TITLE: HARMONIC RELATIONSHIPS
PUBLISHED BY: CREATIVE
MEMORY: 16K
Hi-Res graphics display various harmonic relationships.
PRICE: TAPE or DISK, 19.95

TITLE: HIGHER GRAPHICS
PUBLISHED BY: SYNERGISTIC
MEMORY: 32K
HARDWARE: DISK DRIVE

A collection of programs and shape tables that lets any programmer create detailed and beautiful high resolution displays and animation effects. Make your programs come alive by utilizing the full graphical capabilities of the Apple II. Package contains:

Shape Maker- Create shapes with this easy to use shape table generator. Start new shape tables or add to existing one. Correct shapes as they're being produced. Delete unwanted shapes from the table. Display and/all shapes with any scale or rotation at any time.

Table Combiner-Pull shapes from existing purpose tables (see below) and add the ones you want into a new special purpose table. May combine shapes from any number of tables. All shapes can be viewed or deleted.

Screen Creator-Place your shapes on the high-res screen. Add areas of color and text to make detailed displays or game boards for high resolution games. A screen can be created in minutes with this easy to use program. Utilizes any number of shape tables and allows screen to be saved at any time.

Shapes-Four shape tables with over 100 shapes are provided. Included are alphanumerics, chess figures, card symbols (club, spade, etc.), tanks, planes, spaceships, ships, cars, trees, mountains, buildings, etc. Add the shapes you like to your own tables.

High RES Text-How to use high resolution graphics in your programs. Animation effects and display techniques.

PRICE: DISK, $24.95

TITLE: HIGHER GRAPHICS II
PUBLISHED BY: SYNERGISTIC SOFTWARE
THE SCREEN CREATOR - Draw beautifully detailed high resolution screens for use in demonstrations, introductory logos, gameboards, graphs, maps, etc. Place: shapes, text, lines, points, and areas of color anywhere on the high resolution screen at any angle, size, or color in seconds with just a few keystrokes or using the game paddles. Text can be simply typed onto the screen at any angle. You can easily erase mistakes, move screen contents in any direction, load new screens or shape tables, and save your results to disk. No other graphics utility provides all of these features.
THE SHAPE MAKER - With simple to use commands, create new shape tables or

add new shapes to your current library. Design new shapes in any scale, rotation, or color for uses as varied as:
Games - Chess, tank, spacewar, adventure games, etc.
Education - Math symbols, scientific notation, maps, etc.
Design - Electrical components, architectural symbols, etc.
Shapes can be edited as they are being produced. Display any shape at any time, and delete those no longer required.
THE SHAPE SHUFFLER - Drawing from your existing library of shapes and shape tables, create new tables with only the desired shapes in the order required for each specific application. Insert, delete, or transfer shapes from any shape table(s), including those provided, to any other.
SHAPE TABLES - Add the included shapes to your own programs, or simply use them as models for your own creations. Included are: Full alphanumeric character set, chess and card symbols, tanks, planes, men, spaceships, cars, monsters, buildings, trees, mountains, and many more.
TEXT - 24 page document packed with instructions, hints, and details about using the Apple II's high resolution graphics mode for animation or other applications.
48K Apple
PRICE: $35.00 Retail

TITLE: HI-PLOT INTERFACE TO APPLE PLOT
PUBLISHED BY: COMPUTER STATIONS, INC.

This software package allows for lettering and plotting data on the Houston Instrument HIPLOT (DMP-2) plotter of data files created with Apple Plot. Our software driver runs at the rated speed of the plotter and will accommodate up to 6 sets of data for bar charts which is not normally available to Apple Plot using graphic prints for hard copy. HIPLOT is a registered trademark of Houston Instruments, Inc.
PRICE: $44.95

TITLE: HI-RES ALPHANUMERIC MESSAGE
PUBLISHED BY: CONNECTICUT INFO

Allows four lines of crisp characters, 28/line, each character 1/8 screen height to be "puffed"on at comfortable reading speed, to form a message. When 4 lines are filled, a page dissolve occurs and another page can be filled. Capacity is three pages; the message can be made to linger or repeat.
PRICE: Includes two other programs 25.00

TITLE: HI-RES DEMO AND TUTORIAL
PUBLISHED BY: COMPUTER STATIONS, INC.

A demonstration and tutorial on high resolution graphics including the house shown below and how it was done. Diskette from Computer Solutions.
PRICE: $19.95

TITLE: HI-RES DRAWING PROGRAM
PUBLISHED BY: AGENT COMPUTER
MEMORY:

This program is designed to get around the cumbersome Apple Hires routines and enable the user to draw directly on the screen. The program generates points, lines, circles, and irregular shapes. Once generated, the shapes may be duplicated or moved around the screen, and the color, size and angle may

TITLE: HI-RES GRAPHICS PAD
PUBLISHED BY: COMPUTER STATIONS, INC.

The aid that was used to draw the house above is the high-resolution graphics chart. This well designed chart has Hi-Res commands, colors, and screen calls in a summary reference as well as a Hi-Res matrix work sheet. Pad of 50 sheets.
PRICE: $3.00

TITLE: HI-RES TEXT WRITER

Hi-Res Text Writer will alow you to quickly add words and numbers to your Hi-Res displays. The letters and numbers are already formed and put into a shape table.

See Apple Barrel Bushel #1



TITLE: HIRES GRAPHIC PRINTER
PUBLISHED BY: SYSTEMS DESIGN LAB

If you've been perplexed and frustrated by the inability to label your hires graphs or print text characters on the hires screen then take a look at the Hires Printer. Perhaps one of the greatest features about this easy to use program is that it is written in applesoft. The program allows you to print in hires all the standard alphanumeric keyboard characters in addition to 16 user defined characters. Any character, whether it be standard keyboard or defined, can be changed quickly and easily to any symbol, object, or character of your choice. By resaving your program, your newest creations will become permanent until the next time you want them changed. Moreover, this program will append to yours with just two easy call statements. The Hires graphic printer has been fully tested and comes with complete documentation and examples.
16K.
PRICE: $21.95

TITLE: HIRES GRAPHICS UTILITY SET
PUBLISHED BY: SOFT-ONE

A collection of programs designed to facilitate use of Apple II's high resolution graphics. The set includes:

Software Controlled Character Display - permits display of lower case, APL, Russian, Japanese, mathematical notations or other characters, all under software control using a fast assembly language routine.

Shape Vector Table Assembler and Editor - lets you edit, create, store and display high resolution forms with user-controlled memory location, color, shape, scale, rotation, overlay and append features. Applications include games, teaching programs and animation projects.

Find Utility - returns current position on the screen and determines if a point is plotted there.

This utility set requires 4K Apple II Integer BASIC and standard hires graphics routines (INIT, SHAPE, POSN, CLEAR). The set of five programs on tape with manual costs:

PRICE: 9.95

TITLE: HIRES PLAYGROUND
PUBLISHED BY: SYSTEM DESIGN
MEMORY: APPLESOFT ROM CARD, 16K

The HIRES PLAYGROUND allows you to do work or just have fun on the Hires Screen. You may load a picture or any Hires Screen from tape or disk, and then do text editings with any of the standard keyboard or 16 User Defined characters. This program uses a flashing cursor for easy edjting. Once you have completed your editing, you may save the screen back on tape or disk for future use. In addition, you may change any of the 16 User Defined Characters, and by resaving your program, they will become permanent until the next time you want them changed. HIRES PLAYGROUND has been fully tested and documented.

PRICE: TAPE, 24.95
DISK, 29.95

TITLE: HIRES PLAYGROUND
PUBLISHED BY: SYSTEMS DESIGN LAB

This program allows you to do work or just have fun on the Hires screen. You may load a picture or any Hires screen from tape or disk and then do text editing with any of the standard keys or 16 user defined characters. For the first time ever, this program uses a flashing cursor on the hires screen for easy editing. Once you have completed your editing, you may save the screen back on tape, disk or even print hardcopy in three different sizes. Hardcopy printouts require an IP225 printer with the graphic option. Hires playground has been fully tested and documented.

16K.

PRICE: $24.95

TITLE: INTEGER HI RES
PUBLISHED BY: CONTRIBUTED PROGRAMS

This program is a set of machine-language subroutines which allow you to do high-resolution graphics from machine language programs or from Integer Basic. These routines give Integer Basic the same power found in Applesoft. With Integer Hi-Res you can plot 280 points across the screen by 160 or 192 points down the screen, in four colors. What's more, you can color backgrounds, draw lines between any two points on the screen, and draw any predefined shape in many different sizes and rotations. If you have not used the Apple's high-resolution graphics before, you will be amazed and delighted at the detailed, speedy images you can produce.

32K.

PRICE: $4.00 Casette $6.00 ASB140D Diskette

TITLE: INTRODUCTION TO LO-RES GRAPHICS
PUBLISHED BY: COMPUTER STATIONS, INC.

Think low-resolution is dull? Read Introduction to Low Resolution Graphics from Scelbi Publications and run the diskette. Discover techniques that are just starting to be applied to high-resolution graphics. Book and diskette. Uses both Integer and Applesoft.
VISICALC is a registered trademark of Personal Software, Inc.
PRICE: $29.95

TITLE: KALEIDOSCOPE
PUBLISHED BY: CONTRIBUTED PROGRAMS

Apple will do many wonderfully flashy, active rigorous programs for you when you feel flashy, active, and full of rigor. But during those times when you are relaxed and comfortable allow apple to create restful beauty for your simple enjoyment. Kick off you shoes, put on some good music and let Kaleidoscope, with its ever-changing mosaic of shape and light, produce a beautiful background to your evening. Integer and Programmer's Aid 16K.
PRICE: $4.00 Casette $6.00 ASB141D Diskette

TITLE: KALEIDOSCOPE
PUBLISHED BY: PROGRAMMAR
MEMORY: 16K, INTEGER BASIC

KALEIDOSCOPE is a hires graphics demo which makes a very intricate kaleidoscope pattern. The user has control of the color used, control over when the pattern is restarted, and control over how fast the pattern is formed.
PRICE: TAPE, 9.95

TITLE: LO-RES GRAPHICS PAD
PUBLISHED BY: COMPUTER STATIONS, INC.

To aid in design of text screen, or low-resolution graphics. Lo-Res commands, colors, etc. included on each page for reference. Pad of 50 sheets.
PRICE: $3.00

TITLE: MANDALA SUPREME
PUBLISHED BY: SYSTEM DESIGN
MEMORY: APPLESOFT (16K FREE MEMORY)

You can now create artistic objects on the APPLE II similar to the popular Double Bessel Function within minutes. Simply enter a few number, and the APPLE will mathematically create a superior 3 dimensional-like object. Using Auto-Create, the program will continuously create one random object after another until interrupted by the user. MANDALA SUPREME is an excellent High Resolution APPLE II demonstration program. Side 2 of the cassette is the well designed and fun game of Thinkum, similar to Nimble.
PRICE: TAPE, 16.95
DISK, 20.95

TITLE: MICRO-PAINTER
PUBLISHED BY: DATASOFT

Paint your APPLE! It's easy with MICRO-PAINTER, the exciting new program that turns your APPLE II into a sophisticated electronic coloring book. You will find your computer screen filled with specially designed patterns, which you can fill with twenty-one vibrant colors in virtually unlimited combinations. MICRO-PAINTER challenges your imagination as you explore this newest dimension in computerized art.
PRICE: $34.95

TITLE: MIDPOINTS AND LINES
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

These two colorful graphics demonstrations will run continuously. Great for store displays, parties, and showing off your computer.

TITLE: NEC SPINWRITER(TM) GRAPHICS
PUBLISHED BY: COMPUTER STATIONS, INC.

Software driver routine which allows user to dump the contents of the high resolution pages (options for Page 1 or Page 2) out to the NEC Spinwriter(TM) printer. Software may be used with NEC Models 5510 or 5520. This assembly language driver will work with any thimble and greatly enhances the versatility of this fine, letter-quality printer. The print out features true proportional results not usually found with letter-quality printer graphics.
PRICE: $44.95

TITLE: NEW! THE ELECTRIC PAINTBRUSH
PUBLISHED BY: PROGRESSIVE SOFTWARE

Create the most dazzling graphics displays you have ever seen with a minimum of effort. The ELECTRIC PAINTBRUSH is actually a simple 'language' in which you can write 'programs' directing your paintbrush around the screen-drawing lines, turning corners, changing white to black, etc. Once defined, these programs may be called by other programs or repetitively executed, each time varying the parameters of brush movement. The machine language interpreter executes your programs almost instantaneously, allowing you to create real-time, animated graphics displays. The screen photots are actually 'snapshots' of the action of a single one-line program over about thirty seconds. Mesmerize your friends with visual effects they've never seen on a TV screen! There's no limit to the variety of exciting and artistic graphics displays you can create with the electric paintbrush. And it's available now for only
PRICE: 14.95

TITLE: OMNI PLOTTING PACKAGE
PUBLISHED BY: POWERSOFT

Package contains 12 Applesoft programs & several resuable data sets including maps and circles. Full color range. Can be used for graphic art, map making, architecture, animation, T.V. ads, clothing design, plotting functions and drafting. Some major programs are: GIN MODE - allowing the user to dial dots, lines, and curves with the game paddles and save the drawings to disk; OMNI PLOT reads, seeks, and plots any data file containing Cartesian coordinates, and save image to disk while preserving the original coordinates; WINDOW PLOT is the same as

OMNI PLOT, but user chooses the portion of the Hi-Res screen the image will appear in; IMAGE PLOT replots images from disk and allows unlimited overlays of images on top of images while the files remain intact. Comes with an 18-page manual. APPLESOFT ROM. 48K

PRICE: DISK $29.00

TITLE: PADDLE GRAPHICS
PUBLISHED BY: ON-LINE SYSTEMS

The most powerful HI-RES graphic development system available. Uses exclusive single paddle sketch mode. Upper/lower case text may be drawn in any size, direction or color. Pictures may be colored in seconds in any of 21 HI-RES colors (must be seen to be believed). Shape-tables can be built from anything on a HI-RES screen. 48K.

PRICE: $39.95

TITLE: PADDLE GRAPHICS
PUBLISHED BY:

Powerful Hi-Res graphic development package from On-Line Systems. Upper/lower case may be drawn on the Hi-Res screen in any size, direction, or color. Pictures may be sketched with the Apple's paddles and filled in any of 21 colors. A shape may be constructed automatically from any object appearing on the Hi-Res screen. Requires Applesoft.

PRICE: $39.95

TITLE: PASCAL ANIMATION PACKAGE
PUBLISHED BY: APPLE COMPUTER INC.

Has the trick of animation been eluding you? Or are you just tired of programming high-resolution shapes in cumbersome assembly language? With the Pascal Animation package you can produce exciting, animated graphics as quickly and as easily as text.

Add life to your graphics! The Pascal Animation Package lets you develop distinctive fonts of graphic shapes or pictures—a horse font, for instance, with stop-action pictures of a horse in various stages of running—then string these "snapshots" together in sequence that mimic movement. This approach also allows you to build a library of useful shapes that can be accessed quickly and used over and over again in your animations.

The Pascal Animation Package: lets you use Pascal to write and manipulate programs with complex, animated graphics ... so you save time developing software; allows you to print out high-resolution shapes at text speed ... so you're able to create animations that behave more smoothly and realistically; provides a ready-made, efficient way to create libraries of shapes, many of which can be animated with the same movement codes ... so you reduce software development costs, and manage animation projects more efficiently.

The Pascal Animation Package uses a special-developed, binary input/output system (BIOS) that knits the Apple's high-resolution screen to its text facilities. This innovation allows you to create a set of images—the shapes of a bird in flight, for example—and treat it exactly like a character font.

In other words, if you let "A" correspond to the bird's "wings up" and "B" to its "wings down" shapes, a Pascal program that printed A, then B, then A, then B (and so on) would result in a bird flapping its wings—slowly or quickly, as wished. Intermediate images could also be added, to make the motion as smooth as desired.

The Pascal Animation Package contains a number of programs, all extremely helpful for programming animated graphics. The Animation program—provided in source code—lets you do character cell animation under control of the Apple's HIRES1 programmable character generator. Seven demonstration programs—provided in source code—are also included in the Pascal Animation Package to illustrate the simplicity and flexibility of Animation.
Another program, "Charedit," is a fast, powerful, high-resolution character editor which you can controll either with your Apple's keyboard or game paddles. Teamed up with Animation, "Charedit" lets you use a variety of dramatic animation techniques.
Also included in the package are: two Pascal source programs that provide string to numeric conversions (either real or integer); source code examples showing how to interface the Apple Graphics Tablet to Pascal programs; and a helpful assembly language routine that lets you use Apple's Communications Interface Card to achieve bidirectional (full duplex) communications from Pascal. Detailed source code has been provided in lieu of extensive documentation.
To use the Pascal Animation Package, you'll need: an Apple II or II Plus with 48K bytes RAM; the Apple Language System; a video monitor or television; an Apple Disk II with controller (16-sector PROMs).
With the Pascal Animation Package, you'll receive: 1) two Pascal Animation Package diskettes; 2) user instructions.
PRICE: $75.00

TITLE: PASCAL TIGERGRAPHICS
PUBLISHED BY: COMPUTER STATIONS, INC.

This package is the Hi-Res graphics dump to the Paper Tiger (Model 440G) required for those using Pascal. Pascal TigerGraphics works with all four standard Apple interface cards and both the parallel (7720B) and asynchronous serial (7710A) cards from California Computer Systems. The dump to printer routine may be added to the user's Pascal Library as an intrinsic function.
This product replaces stock #7504 which is no longer available. Registered owners of #7504 may obtain the new version which supports the CCS interface cards by forwarding their original copy of #7504 along with $10.00 directly to Computer Station.
PRICE: $44.95, Update from 7504 $10.00
(versions for 440-445-460-560 graphic printers)

TITLE: PILOT ANIMATION PACKAGE
PUBLISHED BY: APPLE COMPUTER INC.

Teachers: bring your Computer-Assisted Instruction (CAI) programs to life with the PILOT Animation Package. Used in conjunction with the PILOT Author System, this program is a complete animation "tool shop." Put it to work to illustrate important points, dramatize concepts and principles, and capture your student's attention.
The PILOT Animation Package: lets you write complex graphics programs without prior software expertise; provides an easy-to-use environment ... so your animation task is simplified; stores animation sequence files ... so you can quickly access and reuse them.
When used with the PILOT Author diskette, the PILOT Animation Package's Animator program lets you build and edit special data files of images. Then you can call these files in sequences in such a way as to animate the images.
You'd begin, for instance, by visualizing the particular image you wish to animate, and breaking down the various stages of its motion into key "snapshot" images. Simply use the Standard PILOT Author System's character

generator to construct these key images—or assemble them from an existing character font "library" of images that you've already created and stored. Next, use the Animator program to put the images in motion. You'll end up with a data file of key images in sequence which—like the individual frames of a motion picture—create the illusion of movement. This animated sequence can also be called easily from any PILOT lesson.

The PILOT Animation Package lets you manipulate shapes with simple PILOT statements. If the character set happens to represent a kangaroo, for example, you can easily command the appropriate frame-by-frame options to make the animal bounce across the screen. Then, by transferring Animator files to your PILOT lesson diskettes, you can incorporate the animation sequence into your desired program.

The Pilot animation Package also includes "Maxwell"—a program demonstrating the simplicity and flexibility of PILOT animation—as well as "Hormuz" and "Dr. Memory," two excellent, sample PILOT lessons. In addition, the PILOT lesson "Immediate"—also included in the package—allows you to review your animations on the spot, without having to insert them into complete PILOT programs.

The PILOT Animation Package is written in PILOT. To use it you'll need: an Apple II or II Plus with 48K bytes RAM: an Apple Disk II with controller (16-sector PROMs); Auto-Start ROM; a video monitor or television.

In addition, to incorporate animation sequences developed with this package into PILOT lessons, you'll also need: the Apple PILOT Author system. With the PILOT Animation Package, you'll receive: 1) PILOT Animation Package program diskette; 2) instructions.

PRICE: $75.00

TITLE: PLOT
PUBLISHED BY: BASIC BUSINESS

PLOT is a program which will plot a file of Z,Y data points using a standard 80 or 132 column printer. It allows the user to select the following options:

A) Specify horizontal and vertical axis
B) Title all axis with multiple lines of text
C) Control the scale of the plot
D) Remove the printer distortion
E) Print values on each line of the plot
F) Specify special characters to be used in the plot
G) Control the tick marks and increments
H) Specify the maximum and minimum X and Y values
I) Plot X values on Y-axis and plot Y values on X-axis

The programs allow many more options, and is quite useful in a variety of applications. A 50-page user's manual is included to guide you through its use.

PRICE: Disc 25.00

TITLE: POLAR COORDINATE PLOT
PUBLISHED BY: PROGRESS
MEMORY: 16K & ROM BOARD

A high resolution graphics program which provides the user with 5 primary classic polar coordinate plots and a method by which the user can insert his own equation. When the user's equation is inserted into the program it will plot on a numbered grid and then immediately after plotting, flash, in a table form, the data needed to construct such a plot on paper.

PRICE: TAPE, 9.95

TITLE: ROGER'S EASEL
PUBLISHED BY: SOUTHEASTERN DATA

A paddle oriented color sketch program using lo-res graphics. At last a program which allows you to draw color pictures in lo-res graphics, and then permanently link tham to your own integer or Applesoft programs.

Features of Roger's Easel:

Easily store and recall pictures from tape or disk.

Link up to 41 user created pictures to your own integer or Applesoft programs.

Instantly display any of the linked pictures under program control.

Immediate access to list of commands and detailed instructions within the program.

Plot only where you want to. Erase with a single keystroke and automatically resume origianl color when done.

Besides being just plain fun, applications range from putting more creative screen images in your game programs to educational programs for younger children involving shape or color recognition.

Program includes: ROGER'S EASEL, LO-RES INTEGER, AND LO-RES LINK APPLESOFT. Roger's Easel and Lo-res link-integer are in Integer BASIC and will run on a 16K system. The Applesoft LINK program runs in Applesoft and requires a 20K system. 3 programs, 10 pgs. documentation.

PRICE: CASSETTE, 9.95
DISKETTE, 13.95

TITLE: SHAPE BUILDER II
PUBLISHED BY: PROGRAMMAR
MEMORY: 48K, APPLESOFT ROM

Sick and tired of writing out all those little arrows converting them to hex-adecimal etc? Cure the pain of messy shape tables -- see the shape in Hi-res as you enter it.

PRICE: DISK, 19.95

TITLE: SHAPE TABLE GENERATOR SYSTEM
PUBLISHED BY: POWERSOFT
MEMORY: 16K, INTEGER

The Hires System consists of two parts. The first of which is the HIRES SHAPE TABLE GENERATOR as explained in your Apple literature, hiresolution shapes are drawn using the shape hires subroutine and a shape table. These shape tables are tedious and difficult to design. This system builds the shape table at the same time as you see the shape drawn on the screen. A maximum of 500 point positions are allowed for each shape table. A maximum of 250 tables are allowed. Shapes can also be drawn together on the screen to display a composite picture.
The second part is the HIRES TABLE CONVERTER. The purpose of this program is to convert the shape table built by the HIRES SHAPE TABLE GENERATOR program so that they can be used by the Applesoft basic language.

PRICE: TAPE, 14.95
DISK, 19.45

TITLE: SLIDE MAKER
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.

SLIDE MAKER is a utility program which takes pre-drawn pictures and makes up the slide files for Video Marquee.

TITLE: SLOW SCAN TV SOFTWARE
PUBLISHED BY: GALFO

Display slow-scan TV pictures sent over short-wave radio in Hi-Res graphics. Software demodulated - just connect receiver audio to cassette input on the Apple - no hardware needed! Includes test pictures and listing. ASSEMBLY. 16K.

PRICE: TAPE $20.00

TITLE: TABLE GENERATOR
PUBLISHED BY: PROGRESSIVE

Is a program which forms shape tables with ease. Shape tables are formed from directional vectors and the program also adds other information such as starting address, length and position of each shape. The table generator allows you to save the shape table in any usable location in memory. It is an applesoft program.

PRICE: TAPE, 9.95

TITLE: TABLET-GRAPHICS
PUBLISHED BY: ON-LINE SYSTEMS

All the capabilities of PADDLE-GRAPHICS extended for use with Apple's graphics-tablet. Applesoft and machine language. 48K.

PRICE: $49.95

TITLE: TABLET GRAPHICS
PUBLISHED BY: COMPUTER STATIONS, INC.

Graphic development package from On-Line Systems which has all of the capabilities of Paddle Graphics (Stock #7555) extended for use with Apple's Graphics Tablet. Requires Applesoft.
PRICE: $49.95

TITLE: TEXT TYPE PROGRAM
PUBLISHED BY: COMPUTER STATIONS, INC.

For those who need text mixed in with high-resolution graphics. Text-type allows you to do it easily and offers a choice of 15 character sets including lower case. Diskette and manual from Computer Solutions. Requires 48K, Applesoft.
PRICE: $34.95

TITLE: THE ARTIST'S BRUSH
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

Trade your palette for the paddles and paint your creation.
PRICE: TAPE or DISK, 19.95

TITLE: THE DESIGNER
PUBLISHED BY: APPLE — JACK

THE DESIGNER is a user oriented APPLESOFT program that does the HPLOTing for you. Sometimes referred to as the 'poor man's graphics tablet', it places lines and complex circular functions on the APPLE HIRES screen with the use of game controls and single key-strokes. 2 page animations, disk save and recall, and simple cursor-driven executions are among the features of this crash proof program.
PRICE: $24.95 disk & manual

TITLE: THE PLOTTER
PUBLISHED BY: SOUTHEASTERN
MEMORY: APPLESOFT ROM CARD AND 16K

With the APPLE II, this program will allow you to easily plot equations in High Resolution Graphics in just seconds. For example, you might want too plot this: Y = 2(1 - X) - SIN(X)↑2 +4(X - 2)↑2. The PLOTTER is perfect for the beginning or advanced math student.
PRICE: TAPE, 14.95
DISK, 20.95

TITLE: THE SCREEN MACHINE
PUBLISHED BY: BRODERBUND SOFTWARE

Lets you redefine any keyboard character, create new character sets — foreign alphabets, electronic symbols etc. Save character symbols for later use.
APPLE II, with APPLESOFT or INTEGER
PRICE: $19.95 Cassette

TITLE: TOOL KIT
PUBLISHED BY:

A new product from Apple which brings life to the Hi-Res screen with Animatrix (animation through defining and moving character sets - samples included). Package also has Hi-Res character generator with 28 pre-defined sets, some with upper & lower case, some used for animation. An added bonus is a 6502 Assembler/Editor which will bring joy to the hearts of assembly language buffs. Also includes editing commands for use with Applesoft e.g. Auto, Manual, Renumber, Compress, etc. Requires 3.3 DOS.
PRICE $75.00

TITLE: U-DRAW
PUBLISHED BY: MUSE
MEMORY: 16K

A high resolution programmable graphics editor with tape I/D for storage of finished drawings. Its uses range from architectural type drawings and interior design to computer art and animation. You can creat a figure and rotate, expand, contract or move it anywhere on the video screen with a few simple keystrokes. Includes documentation manual.
PRICE: TAPE, 17.95

TITLE: U-DRAW II
PUBLISHED BY: MUSE
MEMORY: 32K

The complete graphics package. Create a figure and rotate, expand, contract or move it anywhere on your video screen with a few simple keystrokes. Save individual figures or complete drawings on disk and recall them later, layout floor plans, arrange furniture, create beautiful drawings and much more! An elementary animation language provides dynamic programmed manipulation of your figures which are directly transferrable to your own BASIC programs. You won't find better graphics capabilities at 100 times the price.
PRICE: DISK, 39.95

TITLE: VIDEO MARQUEE
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.

VIDEO MARQUEE is a super slide show and billboard combined. Twelve pictures of your own creation (or ours) are shown sequentially without access to the disk after the programs are loaded. Speed is controled by the paddles from a complete stop to very fast (twelve pictures in two seconds). Requires 48K with Applesoft in ROM.

TITLE: VISILIST
PUBLISHED BY: COMPUTER STATIONS, INC.

Utility program for financial planners which lists out the grid location and formulas (rather than the calculations) of any file created with VISICALC(TM). This VISICALC(TM) companion product has been well received as a tool for analyzing financial models built with VISICALC(TM).
PRICE: $24.95

TITLE: 3-D ANIMATION
PUBLISHED BY: PROGRAMMAR
MEMORY: 24K, INTEGER BASIC

This program rotates Lo-res shapes and gives the 3-D effect. The program comes with shapes already created and a program which lets you create your own.

PRICE: DISK, 24.95

TITLE: 3D GRAPHICS
PUBLISHED BY: MICROMUSIC
MEMORY: 16K

This program gives accurate 3D to 2D wire frame perspective transformations of your data bases. Data bases are created in the standard X,Y,Z coordinate system. The perspective drawing output is displayed in high-resolution. Side one of the cassette contains the ready to run program with a sample data base (cube). The program asks you for field of view (telephoto or wide angle), objects location, and viewing angle. Initial entries are given for your easy familiarization. Side 2 of the cassette provides a demonstration of internal program control of viewing parameters. This will help you become familiar with the many uses of 3D graphics such as zooming in on your object and rotating it. Familiarization with the 60 page BASIC manual will then allow you to completely understand the program. Loading your data bases off disk or adapting the program as a subroutine for engineering, educational or art presentations will become an extremely easy task. The program is storable on disk. 16K Floating Point BASIC Apple II with Applesoft Rom

PRICE: 30.00

TITLE: 3D LOAD AND GO PACKAGE
PUBLISHED BY: SUBLOGIC

An Adaptation of our BASIC experimenter's version. The packages offer advantages of both Load & Go experimenter's packages.

Side one of the cassette contains the ready to run program with a sample data base (cube). The program asks you for field of view, objects location, and viewing angle. Initial entries are given for easy familiarization. Side 2 of the cassette provides a demonstration of internal program control of viewing parameters. This will help you become familiar with the many uses of 3D graphics such as zooming in on your object and rotating it.

Familiarization with the 60 page BASIC manual will then allow you to completely understand the program. Loading your data bases off disk or adapting the program as a subroutine for engineering, educational or art presentations will become an extremely easy task.

Since your data bases (X, Y, Z coordinates of line endpoints) are independent of your display resolution you will be able to use your creations with any of our 3D packages on any computer.

Uses the line drawing provided with the Applesoft II ROM. Contains users manual specifically for the Apple II, the 60 page BASIC manual and cassette.

PRICE: 30.00

MATH

A-Stat 79 ..... M-1
A Computer Laboratory Manual for Number Theory M-1
Advanced Mathematical Routines M-1
Algebra M-1
Algebra I M-2
10 Lessons in Algebra M-2
Basic Statistics M-2
Curve M-2
Curve Fit M-3
Complex Mathematics M-3
Compu-Math I M-3
Elect. Engineering M-3
Electrical Engineering I M-4
Elementary Arithmetic Edu-Disk M-4
Engineering Mathematics M-4
Feet and Inches Calculator M-4
The Forecaster M-4
General Mathematics -1 ..... M-5
Interactive Statistics M-5
Introductory Engineering Math M-5
Math M-5
Math Software M-5
Math Practice M-6
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Math Tutor I M-6
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Matrix Invert M-6
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Mumath M-7
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Slope M-9
Some Common Basic Programs M-9
Statistics M-10
Statistics M-10
Statistics M-10
Statistics I M-10
Statistics Pac M-11
Stepwise Multiple Regression M-11
Square Binomals M-12
Take It M-12
Vector Analysis M-12
Mathematics Package Grades 1 to 8 ..... M-13
Elementary, My Dear Apple M-14
The Forecaster II M-15
Some Common Basic Programs M-15

TITLE: A-STAT 79
PUBLISHED BY: ROSEN GRANDON ASSOCIATES

A-Stat 79 is a general purpose statistical package for the Apple which is designed for market research, survey analysis, social and economic modeling, simulations, teaching statistics or any application where the data bases are relatively small. It required 32K with Applesoft on ROM or 48K with Applesoft, plus at least one disk drive.

PRICE: $100.00

TITLE: A COMPUTER LABORATORY MANUAL FOR NUMBER THEORY
PUBLISHED BY: COMPRESS
MEMORY: 32K

Teach number theory as an experimental science, and encourage your students to discover important facts about number theory by means of experiment and inference or induction.

The advantages of such an approach are manifold. The students gain experience at solving problems in mathematics, and learn techniques of approaching problems which should be useful to them in other branches of mathematics. They see the interplay between intuition, experiment, and logical proof. They learn material of a rather concrete nature which will be useful later in their study of abstract algebra.

Through compuer experimentation, the undergraduate student is enabled to experience reserach, or at least something very close to it. The student gathers data and studies a problem on his own, and makes decisions as to what to do next. He makes guesses and tries to observe patterns. The first programming assignments are designed to teach BASIC or any other language.

The instructor's manual contains forty-one expreiments, an explanation of each experiment, including a program to do the experiment, and a run of the program. Extensive supplementary notes are included for each chapter in the student manual.

PRICE: TAPE OR DISK, 95.00

TITLE: ADVANCED MATHEMATICAL ROUTINES
PUBLISHED BY: SERENDIPITY SYSTEMS INC.

The Advanced Mathematical Routines package was designed for use by professionals in the areas of research, business, and operations management. It consists of a set of mathematical tools which provide answers to a variety of common complex numerical problems in relatively short periods of time. The package includes routines for linear regression, matrix operations, numerical calculus, differential equations, and optimization. In addition, a routine is provided for the plotting of equations. Data sets, which are automatically stored on the diskette, can be recalled on demand. Thus, repeated calculations with slightly varied input parameters are possible.

TITLE: ALGEBRA
PUBLISHED BY: GEORGE EARL

Language: Integer Basic and Machine Language
Description: School tested enjoyable algebra programs, using missing words, this interactive program starts the student learning algebra on the high school level.

Includes Cassette and loading instructions.
PRICE: Cassette with 2 lessons 9.95

TITLE: ALGEBRA I
PUBLISHED BY: PROGRAMMA
MEMORY: 32K, APPLESOFT RAM or ROM

This program is used to solve first degree algebraic equations. The program shows each iteration of work much like an algebra student would. This program is great for both BASIC LEARNING and REVIEW.
PRICE: TAPE, 15.95

TITLE: 10 LESSONS IN ALGEBRA
PUBLISHED BY: GEORGE EARL
MEMORY: 32K

Sets AND SUBSETS -- RATIONAL NUMBERS -- REAL NUMBERS -- SENTENCES -- SIGNS -- FRACTIONS -- MULTIPLICATION -- EQUATIONS -- INEQUALITIES -- POLYNOMIALS
PRICE: DISK, 24.95

TITLE: BASIC STATISTICS
PUBLISHED BY: POWERSOFT
MEMORY: 16K, APPLESOFT

This program will process a given dataset of univariate numbers: computing the mean, standard deviation (for biased and unbiased models), standard deviation from the mean, probable error of the mean, and probable error.
PRICE: TAPE, 9.95

TITLE: CURVE
PUBLISHED BY: WEST COAST CONSULTANTS
MEMORY: CURVE PROGRAM 48K
CURVE SUBROUTINES, 16K

CURVE is an easy-to-use program written entirely in BASIC. The program features capabilities to plot:
1). CARTESIAN EQUATIONS, Y=f(X)
2). PARAMETRIC EQUATIONS, X =h(T) and Y=g(T)
3). POLAR EQUATIONS, R=f(S)
4). DATA POINTS OR CHARACTERS ENTERED FROM KEYBOARD.
5). SHADED BAR GRAPHS IN EITHER VERTICAL OR HORIZONTAL ORIENTATION.
6). A FULLY SCALABLE ALPHANUMERIC CHARACTER SET.
7). LINEAR AND LOGARITHMICALLY SCALED AXES.
You can now produce professional graphs and charts using either the CURVE PROGRAM or SUBROUTINES. The CURVE PROGRAM is a keyboard interactive code which fully guides you, step-by-step, through its operation using clear messges and animated CRT graphics. No programming experience is required. Once you enter your design specifications, a plot is immediately drawn. The most elementary knowledge of graphics is all that's usually necessary. Built-in error messages save you lost time and frustration by trapping unreasonable input quantities. You may integrate the entire capability of the CURVE logic into your own programs using our CURVE SUBROUTINES package. These sixteen subroutines provide you with the

flexibility to add customized hardcopy graphics to existing BASIC programs. Both program versions have been thoroughly tested and reflect our 12 years experience designing computer graphics software. Over 100 professional organizations are currently using CURVE in a wide range of technical, engineering and scientific research efforts.
The programs are supplied with manuals which thoroughly familiarize the user with all required input and operational details. Several examples of user input and program lines are given with vivid illustrations of the resulting graphics output. If you already own a HIPLOT plotter, these are definitely the programs you've been waiting for. If you've been hesitating to buy a low-cost plotter because of the lack of software, now is the right time.
PRICE: CURVE PROGRAM, 50.00
CURVE SUBROUTINES, 75.00

TITLE: CURVE FIT
PUBLISHED BY: PROGRESSIVE
MEMORY: 16K
Will take any number of data points in any fashion, and give you the choice of having the computer choose the best curve fit, or you may choose yourself what type of fit you desire. The four given are log curve fit, exponential curve fit, least squares, and power curve fit. The results are then graphed.
PRICE: TAPE, 9.95

TITLE: COMPLEX MATHEMATICS
PUBLISHED BY: HAYDEN
MEMORY: 16K
(Gilder). Contains 8 programs that give the user ability to perform computations of complex numbers in BASIC rather than FORTRAN such as: Absolute Value; Addition; Nth Roots; Exponential, etc.
PRICE: TAPE, 14.95

TITLE: COMPU-MATH I
PUBLISHED BY: EDU-WARE
MEMORY: 48K
The first release in a brand new Edu-Ware instructional series, this total instructional system is unlike anything that has even before been available for the personal computer. More than merely presenting problems in "drill and prompt" programs, this series begins by testing the user's current skills, and then recommends which of six learning units he should enter to improve them.
PRICE: DISKETTE, 39.95

TITLE: ELECT. ENGINEERING
PUBLISHED BY: POWERSOFT

An electrical engineering program that covers, in general, many of the typically used calculations in electrical circuits and in other types of electrical design. The program deals with calculations such as: figuring voltage, amperage, resistance, power, capacitance and power factor. 16K Applesoft II

PRICE: 9.95

TITLE: ELECTRICAL ENGINEERING I
PUBLISHED BY: POWERSOFT
MEMORY: 16K, APPLESOFT

An electrical engineering program that covers, in general, many of the typically used calculations in electrical circuits and in other types of electrical design. The program deals with such calculations as: figuring voltage, amperage, resistance, power, capacitance, and power factor.

PRICE: TAPE, 9.95

TITLE: ELEMENTARY ARITHMETIC EDU-DISK
PUBLISHED BY: MUSE
MEMORY: 48K, INTEGER BASIC

The Elementary Arithmetic Edu-Disk™ was written and designed by a professional educator. It contains an arithmetic readiness test and four interactive lessons designed to teach elementary Addition, Subtraction, Multiplication and Division, on nine different skill levels. These lessons are rich in interactive tutorials and use ex-tensive color graphics and computer simulated voice to maintain student interest and reeinforce basic concepts. The student's scores are maintained on disk and are accessible only through a special teacher's program. The Elementary Arithmetic Edu-Disk™ is self-demonstrating and requires little or no instructor assistance. This program is recom-mended for the student with no prior arithmetic experience, and as a supplement in higher level remedial situations.

TITLE: ENGINEERING MATHEMATICS
PUBLISHED BY: HAYDEN
MEMORY: 16K

Contains 8 programs useful to the engineer such as: Evaluation of a Polynomial, Quadratic Equations (covering all three root cases), Integration by Simpson's Rule, Extended Factorial Calculations, etc.

PRICE: TAPE, 14.95

TITLE: FEET AND INCHES CALCULATOR
PUBLISHED BY: DD
MEMORY: 16K

This program does calculations based on entries made in feet and inches. Functions include addition, subtraction, division, multiplication, roots, powers and decimal equivalents. Operating screen consists of three windows; one for entries, one lists functions, and the third reproduces the problem after entry. Performs calculations to l/64". Has memory which allows recall of last answer for next problem.

PRICE: 10.00

TITLE: THE FORECASTER
PUBLISHED BY: SDL
MEMORY: APPLESOFT ROM CARD AND 16K

Let your APPLE do the work for you. THE FORECASTER performs a complete linear regression analysis and gives you an accurate regression equation within seconds. Your data is then graphed in High Resolution Graphics and a trend line is plotted by using the regression equation. THE FORECASTER is

an excellent tool for those important trend analysis.
PRICE: TAPE, 16.95
DISK, 20.95

TITLE: GENERAL MATHEMATICS -1
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.
(Gilder) Contains 15 programs useful to anyone who wants to improve their math skills and accelerate their computations. #01103, TRS-80 Level II; #01104, Apple II.
PRICE: $14.95

TITLE: INTERACTIVE STATISTICS
PUBLISHED BY: SERENDIPITY SYSTEMS INC.
The Interactive Statistics package is an analysis package designed for teachers and businessmen who do not have access to large computers. The entire system is interactive and its features include menu-prompting and data stored in user-named variables. Available statistical routines range from the simple — e.g., sum, average, and median — to the complex — e.g., binomial and poisson distributions, correlation coefficients, and analysis of variance (both one- and two-way). Results can be displayed or printed in either columnar format, or plotted as histograms or simple X-Y graphs.

TITLE: INTRODUCTORY ENGINEERING MATH
PUBLISHED BY: HAYDEN BOOK CO.

Features 8 programs on such topics as simultaneous equations, evaluation of a ploynomial, quadratic equation, simpson integration, Newton-Raphson roots, derivation of a function, factorial and extended factorial.
PRICE: Cassette 9.95

TITLE: MATH
PUBLISHED BY: EDUCATIONAL ACTIVITIES

Each of these three programs, **Introduction to Math on the Computer, Introduction to Decimals on the Computer,** and **Missing Math Facts,** covers several levels of difficulty and is self-scoring.

TITLE: MATH SOFTWARE
PUBLISHED BY: MATH SOFTWARE
Take an Apple™ into the classroom! Exciting software dramatically demonstrates concepts which are being taught. Math Software products can help to make you a better teacher and also provide you with better students! Taylor Series, Function Grapher 48K, Arithmetic of Functions, Binomial Multiplication, Solving Linear Systems 48K, Graphic Integration Theory, Midpoint & Trapezoidal Rules, Rational Function Grapher, Sine and Coinse Grapher, Solids of Revolution, Limits of Sequences, Polar Graphing.
PRICE: $25 per 48K

TITLE: MATH PRACTICE
PUBLISHED BY: PROGRAMS SOFTWARE
MEMORY: 4K

Choose your range and practice mulitplication tables till you know them. Computer keeps score and scolds wrong answers.

PRICE: 5.00 CASSETTE

TITLE: MATH TEACHER
PUBLISHED BY: CREATIVE
MEMORY: 16K

Teaches simple math using Apples' color graphics.

PRICE: TAPE or DISK 19.95

TITLE: MATH TUTOR I
PUBLISHED BY: INSTANT SOFTWARE
MEMORY: 24K

Parents, teachers, students, now you can turn your Apple computer into a mathematics tutor. Your children or students can begin to enjoy their math lessons with these programs:

Hanging-Perfect your skill with decimal numbers while you try to cheat the hangman.

Spellbinder-Cast spells against a competing magician as you practice working with fractions.

Whole Space-While you exercise your skill at using whole numbers, your ship attacks the enemy planet and destroys alien spacecraft.

All programs have varying levels of difficulty.

PRICE: TAPE, 7.95

TITLE: MATH TUTOR II
PUBLISHED BY: INSTANT SOFTWARE
MEMORY: 20K, APPLESOFT II

Your Apple computer can go beyond game playing and become a mathematics tutor for your children. Using the technique of immediate positive reinforcement, you can make math fun with:

Car Jump-Reinforce the concept of calculating area while having fun making your car jump over the ramps.

Robot Duel-Practice figuring volumes of various containers while your robot fights against the computer's mechanical man.

Sub Attack-Take the mystery out of working with percentages as your submarine sneaks into the harbor and destroys the enemy fleet.

PRICE: TAPE, 7.95

TITLE: MATRIX INVERT
PUBLISHED BY: SDL
MEMORY: 16K

This program will quickly find the inverse and determinate of symmetrical matrix or solve a system of symmetrical linear equations. The concept is very similar to the MAT L = INV (L,R) command where L = Matrix Invert, and R = Determinate. Ther are no limitations to the number of variables you can use in

this program.
PRICE: DISK, 17.95

TITLE: METRI VERSION
PUBLISHED BY: CREATIVE
MEMORY: 16K
Kilo what's -- This one can solve all those conversions.
PRICE: TAPE or DISK, 14.95

TITLE: METRI-VERT
PUBLISHED BY: EDU-WARE
MEMORY: 32K

As today's society begins its transition to the Metric system, this program allows anyone to be fluent in both the English and Metric Systems. Conversion available for length/distance, area, volume, weight and temperture. Includes a Display Page which stores up to 20 conversions easy reading and recall.
PRICE: CASSETTE, 9.95
DISKETTE, 15.95

TITLE: MULTIPLE REGRESSION ANALYSIS
PUBLISHED BY: SDL
MEMORY: APPLESOFT ROM CARD, 16K FREE MEMORY
MULTIPLE REGRESSION is a statistical program used for multi-purpose predictions. The program may be used in business, education, or in any field where historical data is used to predict future events. The program is very similar to the TURF ANALYSIS program, but in addition, it includes the Correlation Matrix, the Inverted Matrix, the Sum, Mean and Standard Deviation, optional hardcopy printout, and more. MULTIPLE REGRESSION ANALYSIS has been fully tested and documented.
PRICE: TAPE, 24.95
DISK, 29.95

TITLE: MUMATH
PUBLISHED BY: MICROSOFT
TURN YOUR PERSONAL COMPUTER INTO A MATHEMATICAL GENIUS!
muMATH Symbolic Math System expands your computer's capabilities beyond the limits of numerical evaluation to a much higher level of math sophistication.
Symbolic Math is a whole new realm of power for microcomputers which traditionally have been limited to the arithmetic operations - addition, subtraction, mulitplication, division and exponentation. Microsoft muMATH gives you the power to do algebra, trig., calculus, integration, differentiation and more-power that has previously been reserved for a few very large computer only.
muMATH SAVES YOU TIME
With muMATH, you use your brains for the important aspects-determining how to get the information you need. You don't waste time on the tedious mechanics of getting your final answer. Type in the expression you want myMATH to solve or simplify. myMATH will give you an answer in a mere

fraction of the time you could compute it manually.
For students and teachers, it's an educational tool. muMATH helps students learn by giving them immediate feedback on their understanding of newly introduced mathematical functions. A student can check quickly to see if his method is right. There's no confusion because of a simple mechanical error. muMATH can support the standard mathematics curriculum from elementary arithmetic through algebra, trigonometry and calculus.
For the scientists and engineers, it's professional tool. In practical professional applications, muMATH is an incredible time saver. It performs the exact numerical and symbolic computation that scientists and engineers need on the job.
LET'S GET DOWN TO SPECIFICS
Among the new mathematical capabilities muMATH brings to your computer are:
Exact rational arithmetic. When you perform an operation on a fraction, you get a fraction as the answer, so there's no round off error.
Virtually infinitive precision. Up to 611 digits. You realize how large 10_{611} is when you compare it to the estimated number of electrons in the entire universe, 10_{72}
Numbers may be expressed in any desired radix base from 2 through 36.
Unbound variables. Variables to which no value has been assigned may be used. muMATH treats them as legitimate algebraic unknowns.
Exact solution of an algerbraic equation.
Treatment of equations as expressions which can be assigned, added, multiplied, squared, etc.
Logarithmic, exponential and trigonometric simplifications and transformations.
Symbolic integration of indefinite and definite integrals.
You can expand the capabilities provided in the muMATH package by programming your own. muSIMP the language in which muMATH is written is included in the muMATH package.
muSIMP a superset of the language LISP, is an extensible, high level programming language especially suitable for programming interactive symbolic mathematics and other artificial intelligence applications.
muSIMP is an applicative, recursive language which makes it ideal for describing complex mathematical concepts. muSIMP functions definitions are easily regarded as data, encouraging incremental system development and making muSIMP features include:
•Many LISP-like functions, including a full complement of Selectors. Constructors, Comparators, and Recognizers, are primitively defined in machine language.
•Infinite precision integer arithmetic expressed in any desired radix base from 2 through 36, is supported by a complete set of numerical primitives.
•A two-pass garbage collector performs automatic dynamic memory management on all data spaces. Dynamic memory management allows muSIMP to respond to queries of arbitrary difficulty, a necessary ability in artificial intelligence applications.
•Flexible program control structures such as WHEN/EXIT, BLOCK/END BLOCK, and LOOP/ENDLOOP permit programs to be written in an elegant recursive style while still allowing the efficiency of a non-recursive loop construct.
•Debugging is faciliated by a TRACE package, informative diagnostics, and interruptable program execution.

•Extremely fast program execution speed have been achieved through the use of such techniques as shallo variable finding, address typed data structures, and a closed pointer universe.
•muSIMP is an extensible language allowing the user to define new operators and control structures.
THE CREATORS
muMATH and muSIMP were developed by David Stoutmeyvr and Albert Rich of the SOFT WAREHOUSE, Honolulu, Hawaii. Having first worked separately on computer symbolic math programs and microcomputer LISP interpreters respectively, Stoutmeyer and Rich worked jointly in 1978 to develop an implementation of muMATH in muSIMP, Rich's variant of his original microcomputer LISP implementation. The object of the research, according to math on computers affordable by every school, office and hobbyist. The result was muMATH, a truly revolutionary symbolic math package for personal computers.
SYSTEM REQUIREMENTS
To take full advantage of the package requires a 48K system. Look for a version of muMATH for the Apple II computer in late summer.

TITLE: NUMBER CONVERTER
PUBLISHED BY: AGENT COMPUTER
Converts numbers from one base to another for bases 2 through 16. Calculates the hex address corresponding to a given decimal number and vice versa, using 2's complement for negative numbers. The range is 32K to -32K since it uses Integer Basic (in Hex, X'0000' to X'FFFF') 8K
PRICE: CASSETTE, 5.00
DISK, 10.00

TITLE: SLOPE
PUBLISHED BY: COOKS COMPUTER

Practice is provided in this program for slope and intercept concepts using linear equations. Subroutines are included to allow decimal input and output with Integer BASIC.
PRICE: 7.95

TITLE: SOME COMMON BASIC PROGRAMS
PUBLISHED BY: COMPUTER STATION
Future Value of an Investment: This program calculates a future value of an investment when interest is a factor.
Depreciation Rate: This program calculates the annual depreciation rate of an investment.
Mortgage Amortization Table: This program calculates and prints a loan repayment schedule.
Coordinate Conversion: This program converts the coordinates of a point given in Cartesian coordinates to polar coordinates, and vice versa.
Prime Factors of Integers: This program lists the prime factors of an integer.
Roots of Quadratic Equations: This program calculates the roots of a quadratic equation.
Permutations and Combinations: This program computes the number of permutations and combinations of N objects taken D at a time.
Normal Distribution: This program calculates the probability and frequency of

given values on a standard normal distribution curve.
Linear Regression: This program fits a straight line to a given set of coordinates using the method of least squares. The equation of the line, coefficient of determination, coefficient of correlation and standard error of estimate are printed.
Tax Depreciation Schedule: This program tabulates annual depreciation amounts. You can use the sum of digits method or any declining balance percentage method.
Anglo to Metric: This program converts a measure given in anglo units to metric units.
PRICE: $34.95 each

TITLE: STATISTICS
PUBLISHED BY: COMPUTER HOUSE DIV.

Mean, Median, Variance, Standard Deviation, Skewness, Kurtosis, Frequency Distribution, Linear Regression, T-Tests, Correlation Analysis, Six commonly used tests to run directly data: Paired, Unpaired, Linear Regression, Man-Whitney, Wilcoxon and Spearman.
PRICE: $58.00

TITLE: STATISTICS
PUBLISHED BY: PROG
MEMORY: 24K, APPLESOFT, ROM or RAM
This program will give the user the ability to carry on many of the statistical calculations found in FORTRAN driven SPSS programs.
PRICE: TAPE, 19.95

TITLE: STATISTICS
PUBLISHED BY: EDU-WARE
MEMORY: 32K
HARDWARE: CASSETTE and DISK
Provides the ability to carry on many of the statistical calculations ordinarily found in FORTRAN drive SPSS programs, including; mean, variance, standard deviation, Pearson correlation, normal distribution, probability and frquency, Chi-square distribution, Chi-square test, T-test.
PRICE: TAPE, 9.95
DISK, 15.95

TITLE: STATISTICS I
PUBLISHED BY: PS
MEMORY: 16K, APPLESOFT
Statistics I is a set of programs that compute Power Curve Fitting, Linear Regression Analysis (Least Squares), Logarithmic Curve Fitting, and Exponential Curve Fitting. A model of the curve may be displayed in high resolution graphics at the users discretion.
PRICE: TAPE, 14.95

TITLE: STATISTICS PAC
PUBLISHED BY: CM&A
MEMORY: 32K RAM
HARDWARE: DISK II SYSTEM

The Statistics Pac includes its own data management system (also available separately) and a battery of programs for curve fitting, probability, general statistics, distribution mathematics and test statistics. The battery of programs utilize the high resolution of graphics capability of the Apple II to allow for curve fitting of the data using linear, exponential, logarithmic, or power relationships. A built-in data base is included to produce a complete set of working examples useful in learning statistical principles. The general statistics element includes standard resolution plots for appropriate histograms and distribution arrays. The system probability elements includes analysis for permutations, combinations and factorials. The random number generator routines include elements for random number tables, random numbers within interval or one-by-one or game theory. The distributions include Binomial, Poisson, Normal, Chi-Square and Student T-Distribution. Many distribution probabilities may be estimated above a point, below a point, inside a symmetric interval, inside a defined interval, outside a defined interval or outside a symmetric interval. The system can handle up to 5 100 x 1 matricies containing raw data, grouped data or frequency arrays. A quick reference chart of legal variables is included to speed up data handling.

PRICE: DISK, 89.95

TITLE: STEPWISE MULTIPLE REGRESSION
PUBLISHED BY: APPLE COMPUTER INC.

Designed especially for the professional researcher, Stepwise Multiple Regression is a statistical analysis program patterned after the UCLA BIOMED multiple regression series. The program allows you to use stepwise regression analysis to test accurately the strength of relationships between variables—up to 60 in a single run. Data is saved to and read from diskettes, with a single diskette capable of storing up to 64 observations for each of 100 variables.

Stepwise Multiple Regression determines all the customary descriptive statistics for any multivariate linear regression, including means, standard deviations, regression coefficients, mutliple correlation coefficients, R^2, residuals, correlations, F-values, and others. The program also provides the correlation matrix and the "stepwise" additions (or deletions) or variables to the explanatory model.

A unique feature of Stepwide Multiple Regression is that it plots residual values using Apple's high-resolution display capability. If your system includes an Apple Silentype printer, you can obtain hardcopy output of these detailed graphs, too.

Stepwise Multiple regression also: reduces your use of large, expensive timesharing systems to perform regression analysis in your research ... so you save money on computer time charges; frees you from the downtime, restricted availability, and other disadvantages of timesharing systems ... allowing you to work at your convenience; keeps confidential data out of large mainframe environments ... so your avoid security risks; lets you conduct remote investigations on-site, anywhere there's an electrical outlet ... so you're able to compute and use statistical information faster.

The Stepwise Multiple Regression system consists of 11 programs contained on a single master diskette—five programs for data management, four for calcula-

tions and reporting results, and two for system integration.
All of the programs are easily selected from a main menu, and all are linked to simplify running the system. By choosing the approrpiate option on the main menu, you can: configure your system; create and prepare variable data diskettes and backups; update, list and add observations to existing variable diskettes; and perform or repeat stepwise mutliple regression analyses.
To use Stepwise Multiple Regression, you'll need: an Apple II Plus with 48K bytes RAM; or an Apple II with 48K bytes RAM and an Applesoft BASIC Firmware Card; or an Apple II with the Apple Language System. Plus: Auto-Start ROM; a video montior or television; an Apple Disk II with controller (16-sector PROMs); a printer (optional).
With the Stepwise Multiple Regression package, you'll receive: 1) Stepwise Multiple Regression master diskette; 2) instruction manual.
PRICE: $150.00

TITLE: SQUARE BINOMALS
PUBLISHED BY: COOKS COMPUTER

This is a drill on squaring binomials. The user selects the number of problems, and the score is given at the end.
PRICE: 7.95

TITLE: TAKE IT
PUBLISHED BY: COOKS COMPUTER

This is a drill-game on addition, subtraction, multiplication and division of positive and negative integers. Input is timed with the student competing against the computer. If the student "wins", the difficulty is increased. If the student "loses" the contest becomes easier.
PRICE: 7.95

TITLE: VECTOR ANALYSIS
PUBLISHED BY: POWER SOFT
MEMORY: 16K, APPLESOFT
This program processes electrical phase and force vectors. The program will convert coordinates from those of the Polar system to the Cartisian system. In this mode the converted coordinates can automatically be plotted using the Apple II high resolution graphics capability.
PRICE: TAPE, 9.95

TITLE: MATHEMATICS PACKAGE Grades 1 to 8
PUBLISHED BY: COMPAK, INC.

For the 32K Apple II and TI 99/4 microcomputers.

The package is designed to support mathematics instruction and improve student achievement. Some instructional materials can be used for review and practice while other materials are designed to introduce and develop mathematical ideas.

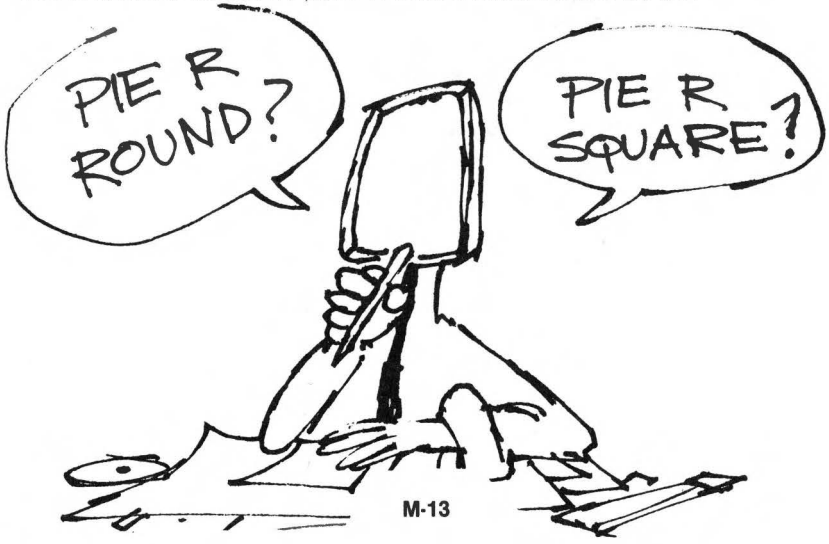
Ten major concepts are covered by the package and it includes over five hundred different self-contained modules. The concept areas include: Addition, Subtraction, Multiplication, Division, Common Fractions, Decimal Fractions, Percents, Measurements, Geometry and Elementary Algebra.

Instruction is individualized so students can move at their own pace. Each concept area contains multiple levels that range from easy to difficult. As students progress within the program, they automatically branch to the appropriate level of difficulty based on their performance score.

The Mathematics Package provides a student recordkeeping feature which allows the teacher to keep track of student progress. At the end of a lesson, the screen displays the number of problems attempted, the number correct on the first try, the number missed, the percent correct and any promotions or demotions. This same information is also automatically recorded on the teacher's "gradebook" disk. A special "gradebook" program enables the teacher to print names, add names, delete names, print scores and change scores. The printing of names and scores may be done individually or by class and on a printer if one is available.

Unique features of the programs include: an escape function which allows students to end the lesson and still retain their score; the capability to erase an answer before completing it; the capability to enter answers in the same direction as they are worked on paper (i.e. right to left for multiplication), and the effective use of attractive color graphics and sound to provide immediate student reinforcement.

The complete Mathematics Package contains ten instructional disks and one recordkeeping disk in a binder with a teacher's manual. The programs can be ordered by the complete package for $495; by all concepts for a single grade level (i.e. the disk for Grade 7 with all ten concepts) for $65; or by one concept for all grade levels (i.e. the concept Addition for all eight grades) for $50. A sample disk is available for $35 as is the Teacher's Guide Manual for $20.



TITLE: ELEMENTARY, MY DEAR APPLE
PUBLISHED BY: APPLE COMPUTER INC.

Elementary, My Dear Apple is a collection of four programs designed to help youngsters learn to spell, understand arithmetic concepts, and sharpen problem-solving skills. Recommended for children 12 years of age and up, Elementary, My Dear Apple is an entertaining way to learn some basic educational concepts.

The first program on the Elementary, My Dear Apple diskette is Lemonade, a business simulation game for one or two players. The remaining three, each designed for a single player, are Darts, Supermath, and Don't Fall. Respectively, they help students understand fractions, solve basic arithmetic problems, and improve word recognition and spelling.

Elementary, My Dear Apple will provide young users with many hours of educational entertainment.

ELEMENTARY, MY DEAR APPLE...

- Is an excellent teaching aid, because it turns rote learning into friendly competition with an Apple computer...
- Absorbs children's attention for hours while they learn, by offering four different, educational games that are all challenging to play...
- Provides wholesome home entertainment that can be enjoyed by all family members.

It's simple and fun to play the games in Elementary, My Dear Apple. Just insert the program diskette into your disk drive. A colorful title page welcomes you to the program and leads directly to the program selection chart menu.

LEMONADE is a business simulation game that combines math drills with business acumen. The player tries to make profits each day from his lemonade stand by estimating the number of glasses that will be sold, setting the price per glass, forecasting the cost of material and advertising, and anticipating the effect on sales of changes in the weather.

DARTS teaches fractions and fraction estimation in a game that simulates throwing darts at balloons. Every time the player hits a balloon, a fraction is displayed. The player then uses the displayed fraction as a reference for his next "throw."

SUPERMATH is a drill and practice program that teaches addition, subtraction, multiplication, and division at several difficulty levels. The player can concentrate on specific drills (for example, "7x" multiplication tables), and can specify whether only integers should be used, or integers with remainders. The program will also help the player determine his difficulty level and will automatically increase or decrease the difficulty as required.

DON'T FALL — a variation of the traditional game "Hangman" — tests word recognition and spelling. The player tries to guess and spell the correct word before the character displayed on the screen falls over a cliff. Don't Fall incorporates one of Apple's "Shell Games" editors, which makes it simple for teachers and parents to supply special words to work with and to guess. In this way, the game can be quickly customized for a particular age group, or to teach a specific terminology (scientific, for instance).

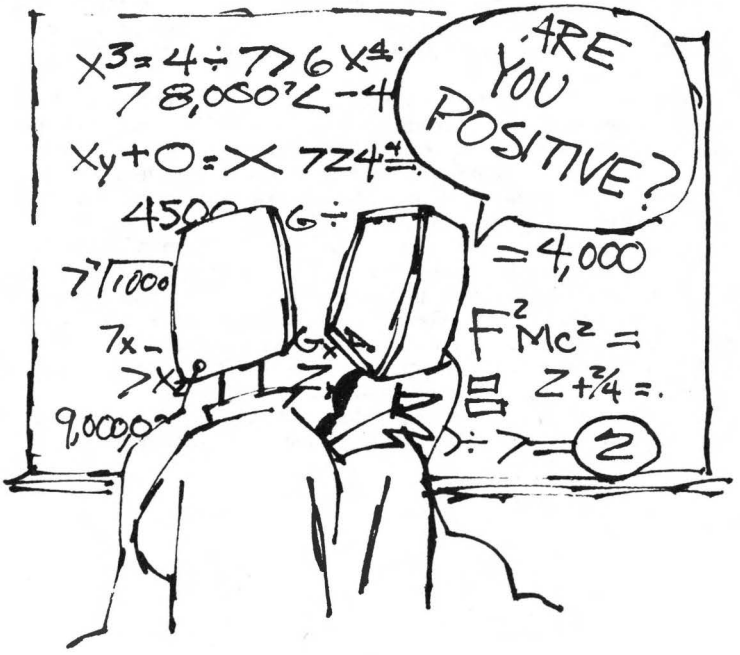
With Elementary, My Dear Apple, youngsters can use the Apple computer with little training and guidance to discover how much fun learning can be.

TITLE: THE FORECASTER II
PUBLISHED BY: SYSTEMS DESIGN LAB

The original forecaster program has been upgraded to label the hires graph screen by using a small portion of the Hires Graphic printer program. The Forecaster II now does a linear regression trend analysis on your data and automatically labels the Hires graph screen for easy reading. The Forecaster II has been fully tested and is an excellent trend analysis program.
16K.
PRICE: $21.95

TITLE: SOME COMMON BASIC PROGRAMS
PUBLISHED BY: COMPUTER STATIONS, INC.

This package includes the book "Some Common Basic Programs" and a diskette with the programs converted to Applesoft and debugged.
The book is the one written by Lon Poole and Mary Boarchers and published by Adam Osborne & Associates, Inc. The programs fall under four categories; Business, Mathematics, Statistics and Miscellaneous.
When you boot the diskette, the menu appears with the four categories mentioned aove. After you select one, you are then given a catalog of all programs in the selected category. You may at any time call up the catalog of all the programs if desired.
A few of the approximately 75 programs are: Future Value of an Investment; Depreciation Rate; Mortage Amortization Table; Coordinate Conversion; Prime Factors of an Integer; Roots of Quadratic Equations; Matrix Inversion; Normal Distribution; Mean, Variance, Standard Deviation; Linear Regression; and Anglo to Metric Conversion.
NOTE: You must receive a copy of the book with purchase of the diskette since the diskette may not be sold separately.
PRICE: $39.95



Computer magazines are your pathways to uses and applications of your microcomputer that are not covered in the basic operating manuals that accompany the equipment.

When subscribing to a magazine, first make sure that it has detailed coverage of your equipment in every issue. Most magazines skew their coverage to one computer or another, with special issues on the other computers.

Second, take note of the advertising content of the magazine. Ads are news that the advertiser has paid to present. As such, they represent an excellent source of information about what's available for your computer. Make sure the ad content is applicable to your equipment and interests.

Finally, look for magazines where the content is intelligible to you. Some magazines regularly feature articles that may be too advanced or too simple for you. Make sure your knowledge and magazine's level of writing are compatible.

Then sit back with a good magazine and read, learn, and enjoy.

MAGAZINES

This section contains magazines that focus on the micro computer market. Most of these are available through your local dealer or by subscription. These magazines are an excellent source for new products, articles on many uses and different applications of Apple products. Some of these publications cover Apple products only, while others feature articles on all micros. Many have product reviews, program listings as well as advertisements.

Magazines are a good source of information for new users as well as the seasoned computerist. I have listed some monthly publications that will keep you busy for a while. These publishers concentrate on the "personal computer" as well as hobbyist market and stay current on the ever changing micro field. Also refer to Book Section of this book for other reading material.

Good reading

R. Love

BYTE/Byte Publications/70 Main St./Peterborough, NH.
Averages 280-350 pages. The largest circulation of "Personal Computing" publications. Also the first magazine of its kind. Approximately 120,000 circulation. Excellent reading for novice to old timer. Book reviews, clubs, newsletters, what's new, 10-12 good articles.

CREATIVE COMPUTING/Creative Computing/Morristown, NJ.
Averages 200-300 pages. Published bi-monthly, another good subscription to have lots of game reviews and "creative" applications, some program listings, new product releases. Young staff with excellent flair for gathering good material.

DR. DOBBS JOURNAL OF COMPUTER CALISTHENICS AND ORTHODONTIA/Peoples Computer Co./Menlo Park, CA
Yes it is a computer publication. No advertisings, contains reviews, critiques of hardware and software but primarily software. Slanted more towards the developed user and not the new user.

INTERFACE AGE/Cerritos, CA
We suggest this as a good source for general features, business features, hardware features, a section called learning center, tutorials, software features, book reviews, new products, micro market, and contains a business software review each month. Free program listings. We recommend this for a good start in gathering information. Averages 200 pages.

PERSONAL COMPUTING/Boston, MA
Good for the home computerist and hobbyist as well as small business. Good review of chess strategies, lots of good home use applications, departments include feedback, random access, future computing, computer chess, computer games, computer bridge, bookshelf products close up, what's coming up. Averages 100 pages.

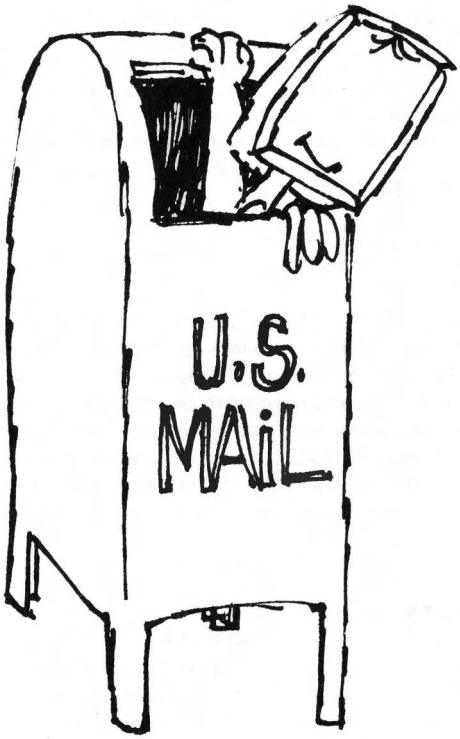
PEOPLES COMPUTER/Peoples Computer Co./Menlo Park, CA
This magazine deals with education and most of its articles are aimed at teaching basics of software and hardware. Most of its staff are teachers.

SOFTALK
Softalk is a news and feature magazine that is distributed free to owners of Apple microcomputers. Written in a conversational, nontechnical style, the magazine reviews software, profiles personalities in the industry, announces new products, covers news of companies supporting the Apple, presents a list of the top selling software for the Apple, and presents programming tutorials on assembly language, Pascal, and Basic.
Articles are illustrated with four-color photographs and/or contemporary artwork. A contest is included in each for the enjoyment of readers with merchandise prizes awarded to winners.

MICRO-6502/Chelmsford, MA
Articles on 6502 processors, covers a wide variety of interests. Departments include editorial microscope, new publications, micro processors in medicine, letterbox, micro club circuit, microbes, micro software catalogue. 100 pages average.

MAILING LIST

Apple Post ML-1
Commercial Mailer ML-1
Disc Mailing List ML-1
EasyMailer ML-1
Mail Address Listing ML-2
Mail List ML-2
Mail List ML-3
Mail List ML-3
Mailing List ML-4
Mailing List Database ML-4
Mail List Package ML-5
Mailing List Management ML-5
Mailing Label Package ML-6
Mail List II ML-6
Mail Power ML-6
Mailing/Phone List ML-6
Mail Power ML-6
Mailroom ML-7



TITLE: APPLE POST
PUBLISHED BY: APPLE
MEMORY: 48K RAM, APPLESOFT BASIC LANGUAGE
HARDWARE: 2-6 DISK DRIVES
PRINTER 11A (CENTRONICS 779 TRACOTR/CONTROLLER)
APPLEPOST is a data base system that handles the creation and maintainence of mailing lists of up to 500 names, addresses, and phone numbers, and can print lists or actual labels in order by name or zip code. APPLEPOST makes it possible to locate names and phone numbers quickly, and uses a unique "phonetic search" feature to locae names even when correct spelling is not known. The mailing list system is packaged including a manual and program diskette.
PRICE: DISK, 49.95

TITLE: COMMERCIAL MAILER
PUBLISHED BY: STONEHENGE COMPUTER COMPANY
COMMERCIAL MAILER has an incredible capacity of 30,000 names per mailing list. Written in Applesoft for the APPLE/Corvus system, it can handle an unlimited number of lists, each with a 30,000 capacity for a 6 line record, which is fully adaptable to your format. Written by Mike Mahoney, the program is menu driven, with features such as create list, select, display, report, maintain by zip or alphabetical order, finds entry, browses, changes, adds, deletes, searches, and has utility/code field. Lists can be located anywhere on a disk, and the system can produce 1UP, 2UP, 3UP or 4UP Cheshire or pressure sensitive labels. Additionally, it is fully prompting, easy to run, and comes with a detailed user manual. Required is a 48K APPLE, 80 or 132 column printer, the Corvus 11AP Hard Disk. Optional is the Corvus Mirror and Constellation. Stonehenge is now making this program available for $250.00 plus $3.0 shipping. Additional information is available with a request on your company letterhead.
PRICE: $250.00 plus $3.00 shipping.

TITLE: DISC MAILING LIST
PUBLISHED BY: CRITERION
MEMORY: 16K
A mailing list program with all essential features that will still fit in a 16K Apple. The following commnands are supported: Add Records, Search for Record, Print File (auto or manual), Back-up File and Sort. Once a record is found (by the Search Command), it can be changed or deleted. The program will search for all occurrences of the same last name in the file. The Program uses a serial interface (RS-232) driver (supplied) for printing, but can be easily adapted to use a parallel interface. Program runs as received with either serial of Apple parallel interface-source code for the program is included Integer BASIC.
PRICE: 25.00

TITLE: EASYMAILER
PUBLISHED BY: INFORMATION UNLIMITED
EasyMailer is a **"Continuous Letter Writing Module."** It is another step toward office communications of the future. EasyMailer, in conjunction with the EasyWriter word processing system, affords your computerized home or office the power of a data base combined with the flexibility of a true word processing system.
EasyMailer gives your office the professional and personalized look of

the computer age. Using this new module, you can actually design your own mailing list! The system supports complete user definable record format, entry, update, and editing.

With EasyMailer you create your document with the EasyWriter word processor. We added one command to the EasyWriter system which will enable it to go automatically to your mailing list file and INSERT names and addresses from your mailing list directly into your text file. You can now print information from a name and address file within your EasyWriter file, using all printing commands. The system will also print names and addresses on continuous envelopes of labels.

EasyMailer has several 'MENU' screens making this system as easy to use as the EasyWriter system.

FEATURES

- Single key stroke menu driven commands
- Fast disk based QuickSort
- Multi-field insertion within text

APPLICATIONS

- Professionals - Mailing list of clients, customers and vendors
- Educators - Sending letters to parents or staff members
- Advertising Professionals - Personalized direct mail advertising
- Political Candidates - Campaign letters
- Fund raisers - Letters, Reminders, Thank you notes, etc.

PRICE: DISK $69.95

TITLE: MAIL ADDRESS LISTING
PUBLISHED BY: COMPUTER HOUSE DIV.

Review any address or printout mailing labels sorted by zip code, city, or state. Stores up to 1,000 names & addresses per diskette.

PRICE: $80.00

TITLE: MAIL LIST
PUBLISHED BY: COMPUTER DISTRIBUTORS

This is actually a data base system that allows the user to designate up to 14 fields (such as: name, address, city, state, zip code, telephone number, date last contacted, date last sold, Democrat, Republican, anti-abortion, vacant land prospect, etc.) and to designate the length allowed for a response in each field. Program taracks the number of records used so far, and the number left on the diskette. Program will sort by any of the user-designated fields, and alphabetically. The same program can be used to control a very large number of data diskettes, each with different user-designated fields and field lengths. Updated information: 750 labels per disk, Hi-speed link hook-up...Lots of nice features to it!

PRICE: Disk, $110.00
Order 5" or 8" Drives

TITLE: MAIL LIST
PUBLISHED BY: DR. DOLEY

User defined fields with 1340 names per diskette. Files kept in sequence by any field within each record.

PRICE: 99.95

TITLE: MAILING LIST
PUBLISHED BY: MICRO SOFTWARE

CAPACITY:

500 Names and Addresses per 5 1/4 inch diskette. Provisions are included to split files between diskettes giving virtually unlimited storage capacity by, for example, storing names starting with A to K on one disk, L to R on the second disk and S to Z on a third disk.

SPEED:

This program is written as a machine language/Applesoft hybrid that enables the program to run at maximum speed, and still retain the ability to be easily modified by the user. Any name on a diskette can be retrieved within 3 seconds. Names and addresses can be sorted in either Alphabetical or Zip code order. The sort typically requires less than 2 seconds to process 500 names.

FEATURES

* Total user control of printed output format. The user defines label position on fan-fold forms, a provision is made to print addresses directly upon hand fed or pin feed envelopes. Output can be in either zip or name order, and can be specified by a range of zip codes or a range of names. Printing may also be selected by a 15 byte code field. Code field selection can contain "wild card" characteristics.
* Duplicate names are recognized and taken into account on all functions. This permits you to maintain duplicate records if desired. Any change or delete will verify the record if there is a duplicate in the file.
* Fields included for use are:
  - First and Last names
  - Secondary name, company, title or attention.
  - Street Address
  - City and State
  - Zip code (United States and Foreign)
  - Telephone number, including Area Code
  - 15 byte user defined code
* Names may be displayed on the screen, and the program may be used as a powerful "address book" if desired. A search by telephone number is also implemented, which can be used to check telephone bills.

This program may be used by itself, for mailing lists and labels, or in conjunction with our Form Letter program. The Form Letter program takes a model letter created with our Text Editor, and inserts information from the Mailing List files into the letter under user control. It then prints out a letter, for each entry (or range of entries) in the Mailing List file.

PRICE: $39.95

TITLE: MAILING LIST
PUBLISHED BY: VIDEO WORLD

This program is similar to small mailing list except it has no limitations because of memory. The list may be sorted on any field for the printout. It is a very complete mailing system. It will serve any business small or large. It is not an information program and does take a long time to search a long list, however it will owrk as one - it is just a little slow. You will find this to be a super program if you do a lot of mailing. It will print any number of labels per name and up to four labels per line.
PRICE: Disk 30.00

TITLE: MAILING LIST DATABASE
PUBLISHED BY: SYNERGISTIC SOFTWARE
MEMORY: 48K WITH APPLESOFT ON ROM
HARDWARE: ONE DISK DRIVE

This new, user oriented mailing list program introduces professional quality and speed to the processing of name and address files. The self prompting features of Mailing List Database aid the user in creating and maintaining address files. Labels or printed lists can be readily produced at any time.

SINGLE KEYSTROKE COMMANDS—Any record can be displayed, edited, deleted or printed with just a few keystrokes. Updates and additions have never been faster or easier. The program uses fast binary rather than the slower text files.

CONVENIENT DATA ENTRY—All required inputs are prompted by the program. Recurring information and default names and numbers can be entered with a single keystroke.

***MACHINE LANGUAGE SEARCHES**—Any record in a given file can be found in less than one second by specifying part of all of 1 or 2 fields. All files on one or two disks can be searched with a single command.

MACHINE LANGUAGE SORTS—All records can be sorted by any field or combination of any 2 or 3 fields. Sorting 200 records, comparing 50 characters takes less than a minute. After sorting, files can be saved, printed, or displayed.

***LARGE CAPACITY**—Up to 1700 records on 2 disks can be accessed in seconds. A single print command will print all records on both disks or only those matching 1 or 2 search keys.

FLEXIBLE APPLICATION—The program can be adapted to numerous commercial and personal uses. Current suppliers, customers, clients, patients, members, even Christmas card lists can be kept on individual, updated files at all times.

PRICE: Disk, $40.00

TITLE: MAIL LIST PACKAGE
PUBLISHED BY: HIGH TECHNOLOGY

The MAIL LIST PACKAGE, written in Apple's Integer Basic, will store your mailing list on diskette for easy access. And you may have as many separate mailing lists as you desire.

You may list all OR part of your mail list in chronological order OR sorted by any of the fields named below.

You may obtain a page listing of mailing records OR you may print mailing labels OR you may get a telephone listing.

You may search the mail list file by person's name or company name.

EASY-TO-USE: All programs provide clear, readable, easy-to-use screen formatting. And the MENU of programs allows you to merely enter a number to select the program you want to use.

FEATURES: You may store up to 700 records on an otherwise empty diskette. Each mail list record contains the following:

Field Name	Characters
CATEGORY	3
PERSON'S NAME	30
COMPANY NAME	30
ADDRESS	30
CITY	21
STATE	2
ZIP	5
TELEPHONE #	12

CATEGORY field - You may subdivide your mailing list by using this field. When you ask for a listing of your mail list or for mailing labels or phone list, you will be asked whether you would like to have a listing of the entire file or only one CATEGORY.

TELEPHONE field - This field may be used for other purposes if you wish. Since you may sort by the telephone filed, it may be useful as a descriptor. Or you may want to use it as a comments field.

STATE field - One program in the package provides you with a handy listing of all two-letter state abbreviations.

PRICE: 40.00

TITLE: MAILING LIST MANAGEMENT
PUBLISHED BY: CHARLES MANN

This package is designed to manage mailing list operations for a small business professional societies, social clubs, or samll mail houses. The tape program will handle up to 80 names (320 lines) per run with multiple run as easily as reloading the tape based data file. Key Code system allows list security from unauthorized use. With the system, one C-30 cassette will hold about 400-4 line address and separate lists may be made for zip code sorting, function sorting, or dales date sorting.

PRICE: TAPE, 79.95

TITLE: MAILING LABEL PACKAGE
PUBLISHED BY: MICRO SOFTWARE

Stores 3-line or 4-line addresses (may be mixed) plus phone # and a 15 character code field, any one record may be accessed by name or phone #, prints in zip code order, will print all records or select by code field with wild card, any number of labels horizontally, user formats spacing, may be used with any printer interface with very slight program modification. Five hundred records maximum on one diskette with 48K. 32K

PRICE: Disk 40.00

TITLE: MAIL LIST II
PUBLISHED BY: DYNACOMP, INC.

This many-featured program now includes full alphabetic and zip code sorting as well as file merging. Entries can be retrieved by user-defined code, client name or Zip Code. The printout format allows the use of standard size address labels. Each diskette can store more than 1000 entries (single density; over 2000 with double density systems)!
Available for North Star only.

PRICE: $21.95 postpaid

TITLE: MAIL LIST SYSTEM
PUBLISHED BY: EASTERN HOUSE SOFTWARE

Requires 48K Apple, disk, Applesoft in ROM. Sorts on zip code or last name. Approximately 1000 names/diskette.

PRICE: $34.95, Manual & Diskette

TITLE: MAIL POWER
PUBLISHED BY: SYSTEMS DESIGN LAB

MAIL POWER is the Mailing Management System that makes Form Letter Processing a reality when used with TEXT POWER. In addition, MAIL POWER is the only mailing system available with full upper and lower case capability. The major features of MAIL POWER include: Dan Paymar Lower Case Adapter Compatibility; Form Letter Processing When Used with Text Power; Inserts Date, Address, or Saluatation Anywhere in Letter When Used With Text Power; Complete Search and List Functions; Directly Links with Another Super Fast Sort Routine; Four-way Data Output Capability.
MAIL POWER is an excellent Mailing Management System and includes over 20 pages of comprehensive documentation. MAIL POWER is now available through your local dealer.

PRICE: $34.95

TITLE: MAILING/PHONE LIST
PUBLISHED BY: COMPUTER HOUSE DIV.

Enter, edit, delete, display and/or print up to 950 address per diskette. For each address the following items are shown: name, company name, company division, street address, city, state, zip code (up to 10 digits) and phone number including area code. Up to four entires possible per minute from keyboard. This system is capable of driving a 180 character per second, bi-directional printer continuously. Any number of diskettes may be used.

PRICE: $80.00

TITLE: THE MAILROOM
PUBLISHED BY: CONTINENTAL SOFTWARE

Up to 650 names per disk. Ability to sort on any of 12 items and/or special sorts on a portion of total entries. Prints labels 1, 2, or 3 across. Sorts names in 1-6 seconds.

PRICE: $29.95

MECC MECC-1
MECC Apple Demonostration Diskette MECC-1
Elementary — Volume 1 (Mathematics) MECC-2
Elementary — Volume 2 (Language Arts) MECC-2
Elementary — Volume 3 (Social Studies) MECC-2
Elementary — Volume 4 (Mathematics and Science) MECC-2
Mathematics — Volume 1 (Senior High) MECC-2
Science — Volume 1 (Senior High) MECC-2
Science — Volume 1 (Senior High) MECC-3
Science — Volume 2 (Senior High) MECC-3
Social Studies — Volume 1 (Senior High) MECC-3
Social Studies — Volume 2 (Senior High) MECC-3
Music Theory — Volume 1 ..... MECC-3
Business — Volume 1 ..... MECC-4
Teacher Utilities — Volume 1 ..... MECC-4
Asetheometry — Volume 1 ..... MECC-4
Agriculture — Volume 1 ..... MECC-4
Driver's Education/Industrial Arts — Volume 1 ..... MECC-4
Elementary — Volume 5 (Language Arts) MECC-5
Programmer's Aid — Volume 1 ..... MECC-5
MICAS — Volume 1 ..... MECC-5
CAM — Volume 1 ..... MECC-5
Shape Tables — Volume 1 ..... MECC-5
Elementary — Volume 6 ..... MECC-5
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Computer Awareness Materials MECC-8
Minnesota Developed Programming Manuals MECC-8
Other Timeshare Programming Reference Manuals MECC-8
Training Materials MECC-9
Apple II Diskettes and Support Booklets MECC-9

MECC

The Minnesota Educational Computing Consortium, (MECC) is an organization created by the four public educational systems in Minnesota to coordinate and provide computer services to students, teachers and educational administrators throughout the state. MECC draws upon the resources of member systems and a professional staff in providing the overall review of computing plans and budgets, a statewide instructional computing network, the development or regionally-based management information systems and support to a variety of special projects utilizing computers.

HISTORY

The Minnesota Educational Computing Consortium was officially established in July, 1973. At the culmination of an extensive planning effort involving state government officials and private citizens as well as educators, the Consortium was created when the University of Minnesota, the State University System, the Community College System and the State Department of Education and Administration signed a joint powers agreement. This agreement created the organization as well as established its basic goals and objectives. The joint agreement was revised and again approved in 1976.

Upon the formation of the consortium and the selection of an Executive Director, the organization was structured to include three divisions. • Instructional Services • Management Information Services • Special Projects.

These divisions were staffed as the coordination and service needs were identified and formalized by the member systems.

MECC SOFTWARE

This will describe the diskettes available from the Minnesota Educational Computing Consortium for the APPLE II™ microcomputer. To order these diskettes use the MECC PUBLICATIONS AND PROGRAMS PRICE LIST. Be sure you have a recent copy of this free information and order item.

Diskettes sold within the state of Minnesota are DOS 3.3. Diskettes sold out of the state of Minnesota are protected and use DOS 3.2.

All software is distributed on diskettes and designed to operate on a 32K APPLE II with Applesoft in ROM. Software requiring a printer can use APPLE's parallel, serial, or communications card.

MECC has a Non-Minnesota Educational Institutional Agreement Policy for the purchase of microcomptuer courseware (diskettes and support booklets) which may be of interest to agencies or large school districts. Such an arrangement should be advantageous to institutional agencies supporting many microcomputers. If you would like more information on the institutional agreement contact the Director of Instructional Services Office at 612/376-1105.

*MECC APPLE DEMONSTRATION DISKETTE

A sampling of the different kinds of applications available on the MECC diskettes is shown. The software demonstrates applications in drill and practice, tutorial, simulation, problem solving, and worksheet generation. Samples from music, science, social studies, industrial arts, reading and matehmatics are provided. *Sold to Non-Minnesota agencies.

***ELEMENTARY — VOLUME 1 (MATHEMATICS)**

The first elementary diskette contains programs to be used in the elementary mathematics classroom. Games of logic such as BAGELS, TAXMAN, and NUMBER, drill and practice programs, such as SPEED DRILL, ROUND, and CHANGE, and programs about the metric system such as METRIC ESTIMATE, METRIC LENGTH, and METRIC 21 are included on the diskette. *Sold to Non-Minnesota agencies.

***ELEMENTARY — VOLUME 2 (LANGUAGE ARTS)**

The teacher can enter lists of spelling words in the computer and have them used by the program SPELL, which drills students on the spelling, MIXUP which presents the word in mixed up order, or WORD FIND, which will create a word find puzzle for the teacher to duplicate. If words and definitions are entered, a CROSS WORD puzzle can be generated or a WORD GAME can be played. Two other programs included on this diskette are TALK, a program designed to introduce students to the computer or AMAZING which prints out worksheet mazes. Several programs on this diskette use a printer. *Sold to Non-Minnesota agencies.

***ELEMENTARY — VOLUME 3 (SOCIAL STUDIES)**

The sell series, SELL APPLES, SELL PLANTS, SELL LEMONADE, and SELL BICYCLES which appears on the ELEMENTARY VOLUME 3 diskette can be used to teach elementary economics to students in grades 3-6. CIVIL will reinact battles of the CIVIL war while STATES and STATES 2 provide drill and practice on the location of states in the U.S. and their capitals. *Sold to Non-Minnesota agencies.

***ELEMENTARY — VOLUME 4 (MATHEMATICS AND SCIENCE)**

Two mathematics programs ESTIMATE and MATHGAME provide reinforcement on estimating and basic facts. Food chains in fish can be studied through ODELL LAKE while ODELL WOODS deals with food chains in animals. SOLAR DISTANCE teaches the concepts of distances in space and URSA provides a tutorial on constellations. *Sold to Non-Minnesota agencies.

***MATHEMATICS — VOLUME 1 (SENIOR HIGH)**

BAGELS, SNARK, ICBM, and RADAR will teach students logic while reinforcing the concepts of plotting points or angle measurements. ALGEBRA provides a drill and practice in solving equations. Three programs on the diskette can be used in plotting equations on a grid: SLOPE which is designed for use in ninth grade with linear functions, POLYGRAPH which will plot any equation on a rectangular coordinate system, and POLAR which graphs functions on polar coordinates. *Sold to Non-Minnesota agencies.

***SCIENCE — VOLUME 1 (SENIOR HIGH)**

The FISH program through the use of low resolution graphics shows the circulatory system of a fish. Simulations like ODELL LAKE which is used to explore food chains, URSA which teaches about constellations, and QUAKES which simulates earthquakes are on the diskette. MINERALS can be used in the area of earth science to identify 29 minerals by having students perform simple tests. *Sold to Non-Minnesota agencies.

SCIENCE — VOLUME 1 (SENIOR HIGH)

SCIENCE VOLUME 1 contains some of the programs which were developed through the Huntington II project: BUFFALO, an ecology program on controlling buffalo population, SLITS, a study of Young's double slit experiment, TAG, a simulation about fish tagging procedure, and CHARGE, a simulation of the Millikan oil drop experiment. WHALES, the simulation developed by San Diego schools about the whale migration, DECAY 1, a casino game to understand exponential decay and NEWTON 2, a game to reinforce the concepts of vectors are also included. A printer is optional for some of the programs.

***SCIENCE — VOLUME 2 (SENIOR HIGH)**

Many of the programs on this diskette were developed by Minnesota teachers. PEST, which deals with the use of pesticides, and CELL MEMBRANE which the user takes the part of a cell membrane, can be used in biology classes. SNELL plots light refraction demonstrating SNELL's law while COLLIDE simulates the collision between two bodies. DIFFUSION deals with the diffusion rates of various gasses, NUCLEAR SIMULATION shows radioactive decay of nine different radiosotopes, ICBM and RADAR teach angles and projections on a coordinate system. *Sold to Non-Minnesota agencies.

SOCIAL STUDIES — VOLUME 1 (SENIOR HIGH)

SOCIAL STUDIES VOLUME 1 contains some of the programs that were developed by Huntington II: LIMITS which is a simulation of the resources in the world of the future; the election series, ELECT1, ELECT2, ELECT3 which simulates presidential elections, POLICY, which simulates the impact of special interest groups on policy information and USPOP which projects U.S. population. ENERGY and FUTURE developed at N.W. Regional Lab deal with the issues of energy supplies in the future. A printer is optional for some of the programs.

***SOCIAL STUDIES — VOLUME 2 (SENIOR HIGH)**

Four programs on this diskette are drill and practice programs: STATES and STATES2 which deal with the U.S. states and capitals, COUNTRY which identifies the capital of various countries, and CONTINENT which identifies continents and countries. MINNAG allows users to explore factors in Minnesota agriculture. BARGAIN simulates the collective bargaining process while FAIL SAFE is a simulation on a nuclear war situation (based on the *Fail-Safe* book). CRISIS simulates a confrontation situation in Berlin and CRIMEX has the user control crime in a large city. A printer is optional for some of the programs. *Sold to Non-Minnesota agencies.

MUSIC THEORY — VOLUME 1

The MUSIC programs work in the general areas of terminology and notation, rhythm, pitch, interval recognition, sight and sound, scales and chords. Eighteen programs are included in this series and use sound and graphics capabilities of the APPLE to demonstrate the musical concepts. (Volume 1 contains all programs that were previously on Volume 1 and Volume 2.)

BUSINESS — VOLUME 1

The business diskette contains programs to calculate interest and loans such as BANK which solves three types of bank problems, INTEREST, which compares simple to compound interest and LOANAM which prints loan amortizations tables. MANAGE is a simulation in which the teams of students compete against each other by running a business. MONEY tests users on monetary principles and PAYROLL simulates a payroll program. TYPING is another program included on the diskette which gives users practice in improving their typing speed.

***TEACHER UTILITIES — VOLUME 1**

The TEACHER UTILITIES diskette is designed to aid the teacher and would not be used by the student unless the teacher creates questions using the REVIEWLOAD program. This program allows the teacher to set up a list of questions which can be used either by the REVIEW program or the TEST GENERATOR program. The teacher can also make CROSS WORD puzzles, WORD FIND puzzles, BLOCK LETTER banners and POSTERS using this program. FREQUENCY and PERCENT can be used to calculate grades and do statistical analysis. A printer is needed for some of the programs on this diskette. *Sold to Non-Minnesota agencies.

***ASETHEOMETRY — VOLUME 1**

AESTHEOMETRY deals with the topic of curve sketching by introducing and demonstrating the "space concepts" of elliptical, parabolic and hyberbolic curves. Curve sketching designs are developed to provide an aesthetic view of geometric shapes. *Sold to Non-Minnesota agencies.

AGRICULTURE — VOLUME 1

The AGRICULTURE diskette contains five programs, AGCROP which analyzes crop data, BEEFBUY which provides cost and cash return, CUSTOM which aids in deciding between alternative cropping choices, MINNAG which lets the user explore factors related to Minnesota agriculture, and TRACTOR which performs computations needed to figure the cost of owning a tractor.

DRIVER'S EDUCATION/INDUSTRIAL ARTS — VOLUME 1

Two DRIVER EDUCATION programs prepare students to take the Minnesota Driver permit test. Three additional programs work in the area of industrial arts with MICROMETER graphically drilling the students on using a micrometer and RAFTER and STAIRS doing the calculations needed to build a rafter in a building and stairs in a home.

***ELEMENTARY — VOLUME 5 (LANGUAGE ARTS)**

ELEMENTARY — VOLUME 5 deals with the reading concept of prefixes. The diskette contains five lessons which both teach and practice the prefixes of UN, RE, DIS, PRE, and IN. Two review drills, DRAGON FIRE and PRE - APP II, are also contained on the diskette. *Sold to Non-Minnesota agencies.

***PROGRAMMER'S AID — VOLUME 1**

The PROGRAMMER'S AID diskette provides help for the programmer. Programs to be able to UPLOAD and DOWNLOAD to the MECC system, programs that work with text files including FP TO TEXT, RANDOM EDITOR, SEQUENTIAL EDITOR, and TEST LIST along with programs to work with binary files, BINARY FILE INFO, BINARY FILE TO FP are included. Two programs TABLES and MERGE allow the user to create, change and merge graphic shapes for use in a program. FREE SPACE will tell the amount of space on the diskette while HIDDEN CHARACTERS will located control characters. STARTER will put standard routines such as space bar, music, graphic characters or input into a user's program which is just being created or already created. *Sold to Non-Minnesota agencies.

***MICAS — VOLUME 1**

Micorcomputer Integrated Computerized Accounting System requires dual disks and 132 characters width printer. The MICAS computerized accounting system provides a realistic experience with automated accounting systems. The package consists of four integrated systems: (1) general ledger, (2) accounts payable, (3) accounts receivable, and (4) inventory control. *Sold to Non-Minnesota agencies.

CAM — VOLUME 1

Comprehensive Achievement Monitoring requires 48K memory and Integer BASIC. Volume 1 uses the communication card while Volume 2 uses the parallel or serial card. The CAM system operating on the APPLE microcomputer provides computer processing support for monitoring students' progress on instructional objectives. The CAM student's function is to provide decision-making information to students, teachers, administrators, and parents. This function includes storing objectives and test forms, scoring student test responses, and generating reports indicating individual student and/or group performances on course objectives. Available out of Minnesota through: Hopkins Evaluation Center, Hopkins School District, Hopkins, Minnesota 55343.

***SHAPE TABLES — VOLUME 1**

The SHAPE TABLES diskette includes 12 files of 187 shapes that can be incorporated in a user's program. Also included are all aids needed to work with shape tables. *Sold to Non-Minnesota agencies.

***ELEMENTARY — VOLUME 6**

Historical simulations, OREGON, VOYAGEUR and FURS are included in the ELEMENTARY — VOLUME 6 diskette. Along with these programs are NOMAD which teaches map reading and SUMER. *Sold to Non-Minnesota agencies

SPELLING — VOLUME 1 (PRIMARY)

Twenty spelling drills on frequently misspelled primary and intermediate words are included on this diskette. The teacher can also replace the words and sentences with their own.

***SPECIAL NEEDS — VOLUME 1 (SPELLING)**

This diskette is designed to drill handicapped students on frequently misspelled primary and intermediate words. Students answer problems by either using the game buttons, the game turn knobs or any key on the keyboard. *Sold to Non-Minnesota agencies.

SPELLING — VOLUME 2 (ADULT)

Thirty spelling drills on the most common misspelled adult words are included on this diskette. The teacher can change sentences to include new lists of words.

MECC PUBLICATIONS AND PROGRAM PRICE LIST
MECC TIMESHARE SYSTEM
MINNESOTA DEVELOPED TIMESHARE PROGRAM SUPPORT BOOKLETS

NUM.	PROGRAM SUPPORTED	PROGRAM TOPIC	PRICE
101	ALGE	Algebra equation solving	$ .85
105	BARGAIN	Collective bargaining-Student Booklet	$ .45
106	BARGAIN	Collective bargaining-Teacher Booklet	$ .45
110	BGAME	Business management game-Student Booklet	$ .55
111	BGAME	Business management game-Teacher Booklet	$ .60
115	CELLM	Cell membrane functions	$ .85
117	CHEM	Conquering basic chemistry skills	$ 1.95
120	COMCRIM	Computer related crime	$ 2.50
125	DUAL	Art language-User Manual	$ 1.50
130	ENRPRO	Enrollment projection	$ .45
135	HARLIE,ANIMAL	Intelligent computers	$ 2.35
140	HEALTH	Life assessment-Student Booklet	$ 1.10
145	HEALTH	Life assessment-Teacher Booklet	$ 1.40
150	INTRVAL,SCALE	Music theory	$ 1.40
155	MINIRAP	Readability tests	$ .60
160	MINITAB	Social science applications of MINITAB	$ 1.60
165	MISSIS	Statistics	$ 4.00
170	MCIS	Minnesota career information-Student Booklet	$ .15
171	MCIS	Minnesota career information-Teacher Booklet	$11.00
180	NUCSIM	Nuclear decay	$ 1.70
185	ODELL1	Odell lake food chain	$ .60
190	ODELL2	Odell woods food chain	$ 1.00
200	OREGON	Westward movement of U.S. pioneers	$ .85
205	PEOPLE	Historical personalties	$ 1.25
210	PEST	Pest control	$ .50
215	PSEUDO3	Exteriments in psychology	$ 1.00

220	QUAKES	Study of earthquakes	$ .85
225	RHYTHMS	Biorhythm analysis	$ 1.60
230	SALARY	Salary schedule projection	$ .45
235	SAFE	Nuclear war situation	$ 1.40
240	SELLA,SELLB SELLL, SELLP	Elementary school economics	$ 1.90
245	SPANISH	Spanish grammar	$ 2.40

MINNESOTA DEVELOPED TIMESHARE CURRICULUM BOOKLETS

(Booklets for multiple programs or major curriculum packages)

NUM.	SUBJECT	TITLE	PRICE
300	Agriculture	Agriculture Decision Aids	$ 3.75
305	Athletics	Sports Documentation	$ 3.50
310	Elementary	Elementary My Dear Computer	$16.30
315	Home Economics	Nurtition booklet	$ 3.85
320	Mathematics	(CGMM) Computer Generated Math Materials	$10.00
325	Mathematics	(COMPUTE) Arithmetic wooksheet generator-Teacher Booklet	$ 6.60
330	Mathematics	(MATH) Arithmetic drill and practice	$ 2.20
335	Social Studies	Guide To Social Science Applications	$15.00

OTHER TIMESHARE PROGRAM SUPPORT BOOKLETS

NUM.	PROGRAM SUPPORTED	PROGRAM TOPIC	PRICE
400	ALGEBRA	Algebra Drill and Practice (Conduit)	$ 4.40
401	CALCUL	Calculus and Computer-Student (Conduit)	$ 7.70
402	CALCUL	Calculus and Computer-Teacher (Conduit)	$ 2.50
406	TCHINIC	Critical Incidences in Educ.-Teacher (Conduit)	$ 2.20
407	TCHINC	Critical Incidences in Educ.-Student (Critical)	$ 2.20
408	ECOLMOD	Ecological Modeling (Conduit)	$ 4.40
410	ENERGY	Energy Simulation - Student (NW Regional Lab)	$ 2.15
411	ENERGY	Energy Simulation - Teacher (NW Regional Lab)	$ 2.00
415	FUTURE	Future use of energy - Student (NW Regional Lab)	$ 2.05
416	FUTURE	Future use of energy - Teacher (NW Regional Lab)	$ 2.25
420	GIS	80-81 Guidance Info. Sys.-Student (TSC)	$ 1.50
421	GIS	80-81 GIS Update-Teacher (TSC)	$20.00
430	MKTACT	Marketing in Action-Student (Conduit)	$ 6.60
432	MONTION	Interactive Methods in Physics + Math (Colorado)	$ 4.60
434	MINITAB	MINITAB Student Ref. (Penn State Univ)	$ 4.60
435	MINITAB	MINITAB Student Handbook (Penn State Univ)	$ 8.65
436	OPRMGT	Computer Model in Operation Mgt. (Conduit)	$ 7.70
440	WHEELS	Car Buying Simulation (Amidon Corp.)	$ 2.10

COMPUTER AWARENESS MATERIALS

NUM.	DESCRIPTION	PRICE
500	Mn. Computer Literacy Assessment-Form 8	$ .75
501	Final Report-Computer Literacy Study (MECC)	$11.00
505	History of Computing (MECC)	$ 1.40
510	Are You Computer Literate? (Dilithium Press)	$ 4.50
515	What Is A Computer? (Houghton Mifflin)	$ 3.85

MINNESOTA DEVELOPED PROGRAMMING MANUALS

NUM.	DESCRIPTION	PRICE
520	New User's Guide to MECC Timeshare System	$ .35
525	Quick Reference Guide to CDC/CYBER 73	$ .15
530	Intro. To MECC Timeshare BASIC-Student	$ 3.10
531	Answer Key - Intro. To MECC	$ 1.25
540	Introduction to BASIC Files	$ 1.40
545	BASIC Language Workbook	$ 1.70
546	BASIC, Minnesota	$ 6.05
548	HYCOMP - A Lower Level Language	$ 1.50

OTHER TIMESHARE PROGRAMMING REFERENCE MANUALS

NUM.	DESCRIPTION	PRICE
550	NOS T/S Users Manual-CDC 60435500	$ 7.20
551	NOS 1.5 Reference Manual Vol.1-DCD60435400	$15.85
552	NOS 1.5 Reference Manual Vol.2-CDC60445300	$14.90
553	NOS Terminal Users Ins.-CDC60435800	$ 1.90
554	NOS Application Program.Ins.-CDC6043660	$ 2.10
564	ALGOL Reference Manual V4-CDC60384700	$ 14.00
566	APL Reference Manual V2-CDC6045400	$ 8.15
568	BASIC REFERENCE MANUAL V3-CDC19983900	$ 8.55
571	COBOL V5 Reference Manual-CDC60497100	$19.50
572	COMPASS Reference Manual V3-CDC60360900	$10.55
576	FORTRAN V5 Ref. Manual-CDC60431300	$13.60
580	PASCAL Intro. To Methodical Programming	$10.80
582	SNOBOL Reference Manual	$12.65
590	CALLS Programming Manual	$ 1.80
592	XEDIT Users Info. Manual-CDC7607100	$ 4.00

594	XEDIT Writeup Summary	$ .75
605	Study of Micros In Administration (MECC)	$ 5.00
606	1979-80 Microcomputer Report (MECC)	$10.00
615	Applesoft Basic Prog. Ref. (Apple Computer)	$ 8.50
620	Quick Reference Manual To Applesoft (TIES)	$ .25
625	Apple New User's Guide (MECC)	$ 1.25
630	Authoring Guide (MECC)	$ 5.00
635	Intro To Applesoft BASIC - Student	$ 5.25
636	Intro To Applesoft BASIC - Answer Key	$ 1.90

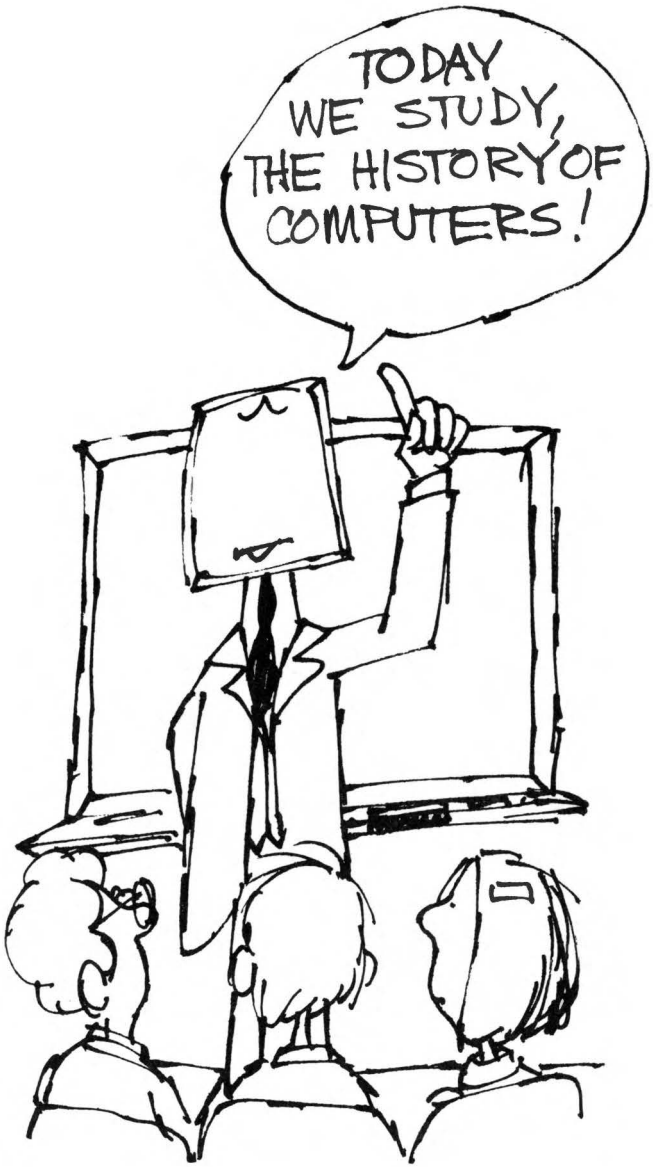
TRAINING MATERIALS

650	Introduction To The APPLE II	$ 1.50

APPLE II DISKETTES AND SUPPORT BOOKLETS

NUM.	TITLE		Minnesota PRICE	Non-Minnesota PRICE**
701	*MECC APPLE DEMO	Diskette	$ 9.00	$15.00
901		Support Booklet	$ 1.75	$ 1.75
702	*ELEMENTARY VOL 1	Diskette	$ 9.00	$15.00
902		Support Booklet	$ 3.20	$ 3.20
703	*ELEMENTARY VOL 2	Diskette	$ 9.00	$15.00
704	*ELEMENTARY VOL 3	Diskette	$ 9.00	$15.00
705	*ELEMENTARY VOL 4	Diskette	$ 9.00	$15.00
905		Support Booklet	$ 4.15	$ 4.15
706	*MATHEMATICS VOL 1	Diskette	$ 9.00	$15.00
707	*SCIENCE VOL 3	Diskette	$ 9.00	$15.00
907		Support Booklet	$ 4.25	$ 4.25
708	SCIENCE VOL 1	Diskette	$ 9.00	N.A.
908		Support Booklet	$ 2.90	$ 2.90
709	*SCIENCE VOL 2	Diskette	$ 9.00	$15.00
710	SOCIAL STUDIES VOL 1	Diskette	$ 9.00	N.A.
910		Support Booklet	$ 2.75	$ 2.75
711	*SOCIAL STUDIES VOL 2	Diskette	$ 9.00	$15.00
712	MUSIC THEORY VOL 1	Diskette	$ 9.00	N.A.
714	BUSINESS VOL 1	Diskette	$ 9.00	N.A.
914		Support Booklet	$ 2.20	N.A.
715	*TEACHER UTILITIES VOL 1	Diskette	$ 9.00	$15.00
716	*AESTHEOMETRY VOL 1	Diskette	$ 9.00	$15.00
717	AGRICULTURE	Diskette	$ 9.00	N.A.
718	DRIVER'S EDUC. VOL 1	Diskette	$ 9.00	N.A.
918		Support Booklet	$ 1.15	$ 1.15
719	*ELEMENTARY VOL 5	Diskette	$ 9.00	$15.00
919		Support Booklet	$ 3.00	$ 3.00
720	*PROGRAMMER'S AID VOL 1	Diskette	$ 9.00	$15.00
721	*MICAS VOL 1	Diskette	$ 9.00	$15.00
921		Support Booklet	$ 8.50	$ 8.50
722	CAM VOL 1	Diskette	$ 9.00	N.A.
922		Support Booklet	$ 2.35	$ 2.35
723	CAM VOL 2	Diskette	$ 9.00	N.A.
	(same as 992)	Support Booklet	$ 2.35	$ 2.35

724	*SHAPE TABLES VOL 1	Diskette	$9.00	$15.00
725	*ELEMENTARY 6	Diskette	$ 9.00	$15.00
726	SPELLING VOL 1	Diskette	$ 9.00	N.A.
727	*SPECIAL NEEDS VOL 1	Diskette	$ 9.00	$15.00
728	SPELLING VOL 2	Diskette	$ 9.00	N.A.
998	MECC Software Distribution Procedure Booklet: Timeshare (no charge)			
999	MECC Software Distribution Booklet: Apple (no charge)			



MEDICAL EDUCATION

Clinical Laboratory Analysis System I ME-1
Computerized Clinical Simulations and
Computer Aided Instructional Programs ME-1
Computerized Clinical Simulations in Respiratory Therapy ME-2
Ventilator Weaning ME-3
Pediatric Asthma ME-3
COPD ME-3
Congestive Heart Failure ME-3
Burn Patient ME-3
Myasthenia Gravis ME-3
COPD — Home Care ME-3
Drug Overdose ME-3
Neonatal ME-3
Chest Trauma ME-4
Renal Failure ME-4
Post Op Pneumonia ME-4
Hypnosis Sensory Stimulation ME-5
Medical Educational Seminary by Milliken ME-5
General Information ME-5
Surgery ME-6
Medicine ME-7
Psychiatry ME-8
Urology ME-8
Microcomputers and Physiological Simulation ME-9



TITLE: CLINICAL LABORATORY ANALYSIS SYSTEM I
PUBLISHED BY: SOFT ONE

This program was developed by a fourth year medical student who had dual undergraduate degrees in Pre-Med and Computer Science.
The program maps blood chemistry values (Na, K, Cl, CO2, BUN, Cr, Glu, P, Ca, Alk Phos, LOH, SGOT, Bili, T.P., U.A., Alb, T3RU, T4, ESR, Chol, Triglyc, Fe, and TIBC or any subset of them onto a set of 100 disease states to produce a weighted differential diagnosis of the patient's chemical abnormalities. Each diagnosis also includes a list of the subset of the patient's abnormal chemistries that is "explained" by invoking the given diagnostic possibility. Derived values such as ANION* GNP* A/O ratio, BUN/Cr ratio ionized calcium, etc. are computed when applicable and are included in the decision-making process for the generation of the differential diagnosis. Unlike many laboratory diagnostic programs which treat continuous laboratory values in a qualitative or semi-qualitative fashion, this program quantifies the abnormalities of each test in it's analysis. Thus, a BUN of 30 is clearly distinguished by the system from a BUN of 100.
PRICE: $99.00

TITLE: COMPUTERIZED CLINICAL SIMULATIONS and
COMPUTER AIDED INSTRUCTIONAL PROGRAMS
PUBLISHED BY: MEDI-SIM INC.

Computerized Clinical Simulations (CCS) are ideal for both student and staff development programs. They allow the examinee to be faced with a wide variety of clinical situations in Respiratory Therapy. CCS allows the student to make decisions and recommendations for therapy and immediately see the results of those actions. They interact with patients just as they would in actual clinical settings.
All MEDI-SIM programs are of "TURN KEY" design. The selected disk is simply inserted in the drive, the computer is turned on and the simulation or computer aided instructional program starts. The learner interacts with the computer using only a few simple typewriter keyboard strokes. Individual scores are delivered immediately along with a printout of the entire program, including questions, responses and scores.
These scores are also securely stored on the program disk for retrieval later by an authorized individual.
These programs have a very broad scope of application. They provide a means of evaluation for staff up-grade or transfer to another service. They provide access to unique problems that are not often encountered in a limited clinical setting. They provide a basis for an on-going staff development program. Computer aided instruction is a proven educational method of providing individual incentive to study. They provide both examination and instructional experiences.
COMPUTER CLINICAL SIMULATION PROGRAMS
#7901 - Ventilator Weaning - Cardiopulmonary Monitoring
#7902 - Pediatric Asthma - Pharmacology
#7903 - COPD - Pulmonary Functions and Oxygen Therapy
#8001 - Congestive Heart Failure - Cardiopulmonary Resuscitation
#8002 - Burn Patient - CO Poisoning & Electrolyte Balance
#8003 - Myasthenia Gravis - Clinical Observation
#8004 - COPD - Home Care
#8005 - Drug Overdose - Pharmacology and Ventilator Care
#8006 - Neonatal - CPAP 'Oxygen Therapy
#8007 - Chest Trauma - Pneumothorax and Ventilator Management

#8008 - Renal Failure - Electrolyte Balance & Respiratory Physiology
#8009 - Post Op Pneumonia - Oxygen & Aerosol Therapy
COMPUTER AIDED INSTRUCTIONAL PROGRAMS
Computer Aided Instruction (CAI) has long been recognized by educators to be an effective incentive to study and review. All Medi-Sim computer aided instructional packages feature interactive instructional techniques. The following areas of study have been included in MEDI-SIM's newest additions to their growing list of computerized instructional materials for the allied health field: Oxygen Therapy, Humidity Therapy, Aerosol Therapy, Respiratory Anatomy, Respiratory Mechanics, Bloodgas Interpretation, Chest Physiotherapy, EKG Interpretation, Pharmacology of Respiratory Drugs and Pulmonary Function Interpretation.
PRICES: COMPUTERIZED CLINICAL SIMULATIONS
$ 129.50 - Individual Problems
1395.00 - Set of 12 Problems
COMPUTER AIDED INSTRUCTIONAL PROGRAMS
$ 99.50 - Individual Programs
895.00 - Set of 10 Programs

MEDI-SIM, INC.
COMPUTERIZED CLINICAL SIMULATIONS IN RESPIRATORY THERAPY

While seated at your Apple II computer you will be taken through a simulated clinical experience. You will gather information about the patient and based on this information you will make decisions and recommendations for the patient's treatment. The format is closely aligned to the National Board for Respiratory Therapy tests thus furnishing excellent practice for the NBRT Registry exams.
OTHER APPLICATIONS:
Recruitment incentive by providing a means of study for NBRT exams.
Evaluation for staff up-grade or interservice transfer
Access to unique problems not often encountered
Basis for ongoing staff development program
Proven method of providing individual study incentive
Provide both examination and instructional experiences
ADVANTAGES TO USING MEDI-SIM COMPUTERIZED CLINICAL SIMULATIONS
Follow NBRT Format
Free you from costly and cumbersome latent image printing
Can be used repeatedly
Content developed by noted authorities
Save cost of developing simulations "in-house"
Content accuracy is assured
Automatic scoring, score storage and retrieval
Problem content is written by Mr. David Assmann, RRT, a nationally noted authority on clinical simulation in respiratory therapy education.
SIMPLE OPERATION
All MEDI-SIM programs are of "TURN KEY" design. The selected disk is simply inserted in the drive, the computer is turned on and the simulation or computer aided instructional program starts. The learner interacts with the computer using only a few simple typewriter keyboard strokes. Individual scores are delivered immediately along with a printout of the entire program, including questions, responses and scores. The scores are also securely stored on the program disk for retrieval later by any authorized individual.
All MEDI-SIM computer aided instructional programs are furnished complete with written questions, answers, scores and rationale.
CONTENT OF INDIVIDUAL SIMULATIONS:

TITLE: VENTILATOR WEANING (#7901)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Peter Smith) This simulation involves the care of a cardiac arrest patient in the coronary care unit. It deals with the care and numerous complications of mechanical ventilation and ventilator weaning.

TITLE: PEDIATRIC ASTHMA (#7902)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(John James) The patient here is a 10 year old asthmatic. Knowledge of pharmacology and oxygen therapy are thoroughly tested.

TITLE: COPD (#7903)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Ed Sneed) In this simulation we are involved with the care of a COPD patient. Pulmonary function testing and interpretation are stressed. Oxygen therapy and chest physiotherapy are also tested.

TITLE: CONGESTIVE HEART FAILURE (#8001)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Patricia Michaels) Here we are involved with the care and treatment of a conjestive heart failure patient who suffers a cardiac arrest. Cardiopulmonary resuscitation and the identification and treatment of various ECG tracings are tested. Appropriate drug and oxygen therapy is also involved.

TITLE: BURN PATIENT (#8002)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Ann Simpson) The subject of this simulation is the care and treatment of a burn patient. Fluid and electrolyte balance as well as oxygen and ventilator therapy is stressed. Blood gas interpretation, with emphasis on acid/base balance is also covered.

TITLE: MYASTHENIA GRAVIS (#8003)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Rhonda Eaton) This simulation involves the care of a patient with myasthenia gravis. Recognition and care of progressive neuro-muscular disease is tested. Decisions concerning continuous mechanical ventilation are also tested.

TITLE: COPD — HOME CARE (#8004)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(John Drew) This is a COPD patient and the simulation is involved with pulmonary function and home care procedures.

TITLE: DRUG OVERDOSE (#8005)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Jack Robbins) Here we are involved with the care and treatment of a drug overdose patient. Knowledge of important laboratory data, oxygen therapy and ventilator therapy are tested.

TITLE: NEONATAL (#8006)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Brian Disney) The care and treatment of a premature neonate form the subject matter for this simulation. In addition to arterial blood gas interpretation, CPAP and oxygen therapy are also tested.

TITLE: CHEST TRAUMA (#8007)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Bill Johnson) This simulation deals with the treatment of an automobile accident patient with severe chest trauma. Identification and treatment of pneumothorax and shock lung is tested.

TITLE: RENAL FAILURE (#8008)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(John Hall) The content of this simulation involves the care and treatment of a post-operative open heart surgery patient. Electrolyte balance and respiratory physiology, along with ventilator therapy including IMV and weaning is emphasized. Low oxygenation and the use of PEEP is also tested.

TITLE: POST OP PNEUMONIA (#8009)
PUBLISHED BY: VERTICAL MARKET SOFTWARE INC.

(Raymond Sullivan) In this simulation we deal with the care and treatment of a post-operative patient who develops pneumonia and eventually renal failure. Oxygen therapy, chest physiotherapy and respiratory care procedures are tested.

FORMAT
All MEDI-SIM computer aided instruction programs are designed to operate on APPLE computer systems. They can be owner revised to operate on other computer systems. Contact us for complete details.

We will answer any question you have concerning your computer's compatibility with our programs.

MEDI-SIM PROGRAMS
COMPUTERIZED CLINICAL SIMULATIONS
Individual Problems ..... **$ 129.50**
Set of 12 Problems **1395.00**

INSTRUCTOR'S AID SLIDE SETS
Individual Sets **37.50**
Set of 12 Sets **395.00**

COMPUTER AIDED INSTRUCTIONAL PROGRAMS
Individual Programs ..... **$ 99.50**
Set of 10 Programs **895.00**

Receive full training from your dealer.

For more information contact (your authorized dealer

Nursing Programs in CE available for credit. Released in early 1981.

TITLE: HYPNOSIS SENSORY STIMULATION
PUBLISHED BY: ANDENT

An aid to suggestive relaxation, behavior modification and trance induction. HYPNOSIS utilizes photo-optic and accoustic sensory stimulation. It is designed for professionals and students of the medical, psychological and social sciences.
Fully variable - 48000 settings.
Instructions.
This is a program that will allow the serious researcher to make various psychological tests involving optic-psychologic physiology.
Various program selections can be used to aid in the operator's instructions for self hypnosis. Use by inexperienced and/or untrained individuals may be detrimental to certain people with psycho-emotional pathologies.
Individuals with the above ab-normalities must not utilize this program without the permissions of a physician or licensed therapist.
Because of the potential for abuse, Suggestive Therapy Instructions will be only given to licensed Doctors, and legitimate researchers on a personal request basis only. Inquiries can be sent to Andent Inc.
Due to the variable conditions under which these instructions may be followed and because of the various psychoemotional pathologies and mental make up of the individuals utilizing this program it is expressly understood and agreed that Andent Inc. shall in no way be deemed or held obligated, liable, or accountable upon or under any guarantees or warranties, expressed or implied statutory by operation of law, or otherwise, in any manner or form for those individuals using or following the above program; and that to such end, Andent Inc. shall in no way be liable for any damages whatever arising out of or in connection with purpose, use, or operation of the aforementioned program of hypnosis.

TITLE: MEDICAL EDUCATION
PUBLISHED BY: MILLIKEN
DISTRIBUTED BY: VITAL INFORMATION

GENERAL INFORMATION
Millken's program consists of a series of computer-based seminars which simulate a conversation between you and a distinguished author. During this conversation, the author will ask you instructive questions which you answer in your own words using the computer keyboard. The computer as instructed and programmed by the author, will then deliver a specific message to you and lead you through the appropriate instructional path.
Seminars are programmed and stored on courseware diskettes which provide approximately 45 minutes of interaction and can be used hundreds of time, if used properly.
You may exit the seminar at any point and return to that exit point or to any other material previously covered at a later date, if you exit the system properly (see instructions in your User's Guide).
If taking a seminar which requires more than one diskette (the number of diskettes per seminar is in parentheses after the title), please complete Part I before interacting with Part II.
CATEGORY 1 CREDIT
Note that seminars offer varying amounts of Category 1 credit and that credit cannot be granted unless:
1. The diskette has been completed as directed
2. A completion code (generated by the computer) is written on a completion card
3. The completion card is sent to Milliken when credit is desired.
CARE OF DISKETTES
Proper care of the Milliken diskettes will insure hundreds of hours of interaction

per diskette.
Please
1. Do not touch the exposed portion of the diskette
2. Keep them in their envelopes and binder when not using them
3. Do not bend or fold them
4. Do not use solutions or erasers to clean them
5. Do not expose them to excessive heat, sunlight or cold.

1. SURGERY

Each seminar has been reviewed and field tested by an Editorial Board composed of members of the Department of Surgery, Washington University School of Medicine.
The first number in parentheses after the title indicates the number of courseware diskettes in a particular seminar. The second number indicates the number of Category 1 credit hours which can be earned.
Surgical Infection (4, 2.5 hrs.) Donald Fry, M.D. and Hiram Polk, M.D. University of Louisville School of Medicine
Diagnosis and Treatment of Abdominal Injuries (3, 2 hrs.) Charles Lucas, M.D. and Anna M. Ledgerwood, M.D. Wayne State University School of Medicine
Immunology for Surgeons (2, 1.5 hrs.) Joel Lundy, M.D. University of Connecticut School of Medicine
Surgical Treatment of Peptic Ulcer Disease (3, 2 hrs.) John D. Halverson, M.D. Washington University School of Medicine
Gastrointestinal Inflammatory Disease (Crohn's Disease) — I (3, 2 hrs.) Ian Lavery, M.D., David G. Jagelman, M.D. and Victor Fazio, M.D. The Cleveland Clinic
Acute and Chronic Pancreatitis (2, 1.5 hrs.) Thomas R. Gadacz, M.D. The Johns Hopkins Hospital
Surgical Parathyroid Disease (1, 1 hr.) Ronald Merrell, M.D. Washington University School of Medicine
Gastroesophageal Reflux (2, 1.5 hrs.) G. Peter Bloom, M.D. University of Connecticut School of Medicine
Clinical Management of Advanced Breast Disease (2, 1.5 hrs.) Joseph F. Paone, M.D. and R. Robinson Baker, M.D. Johns Hopkins University School of Medicine
Multiple Endocrine Neoplasias (2, 1.5 hrs.) Arthur J. Ross, M.D. and Samuel A. Wells, Jr., M.D. Duke University Medical Center
Malignant Melanoma (2, 1.5 hrs.) H. Stephens Moseley, M.D. and E. Carmack Holmes, M.D. University of California School of Medicine, Los Angeles
Peripheral Arterial Disease-I (3, 2 hrs.) Wiley F. Barker, M.D. University of California School of Medicine, Los Angeles
Peripheral Arterial Disease-II (4, 2.5 hrs.) J. Dennis Baker, M.D. University of California School of Medicine, Los Angeles
Colorectal Polyposis (1, 1 hr.) James Woods, M.D. and Jerome J. Decosse, M.D. Medical College of Wisconsin
Cutaneous Thermal Burns (3, 2 hrs.) Bernard S. Linn, M.D. University of Miami School of Medicine
Surgical Nutrition (2, 1.5 hrs.) Robert L. Ruberg, M.D. The Ohio State University College of Medicine Douglas W. Wilmore, M.D. Brooke Army Medical Center
Colorectal Cancer (2, 1.5 hrs.) Kenneth Forde, M.D. Columbia University. Dan Kopen, M.D. Washington University
Gastrointestinal Bleeding (3, 2 hrs.) Robert W. Rout, M.D. Johns Hopkins University School of Medicine
Shock (2, 1.5 hrs.) Joel H. Horovitz, M.D. and G. Thomas Shires, M.D. Cornell Medical Center
Cancer of the Thyroid (3, 2 hrs.) Joseph A. Buckwalter, M.D. University of North Carolina School of Medicine, Chapel Hill

Trauma (2, 1.5 hrs.) Thomas E. Williams, Jr., M.D. Ohio State University College of Medicine
Portal Hypertension (2, 1.5 hrs.) Kenneth Bennett, M.D. Washington University School of Medicine
Extrahepatic Biliary Surgery (3, 2 hrs.) John P. Welch, M.D. University of Connecticut School of Medicine
Gastrointestinal Inflammatory Diseases-II (3, 2 hrs.) David G. Jagelman, M.D. Ian Lavery, M.D. and Victor Fazio, M.D. The Cleveland Clinic
*Thrombosis, Thrombolysis and Thrombophlebitis (3, 2 hrs.) David Effeney, M.D. and F. Wiliam Blaisdell, M.D. University of California School of Medicine, San Francisco

Seminars with a * may not be ready for release. Please contact Milliken for further information as to their availability.

2. MEDICINE

Each seminar has been reviewed and field tested by an Editorial Board composed of members of the Department of Medicine, Washington University School of Medicine.
The first number in parentheses after the title indicates the number of courseware diskettes in a particular seminar. The second number indicates the number of Category 1 credit hours which can be earned.
Management of Cardiac Arrhythmias-I (2, 1.5 hrs.) Morton F. Arnsdorf, M.D. University of Chicago Pritzker School of Medicine
Management of Cardiac Arrhythmias-II (2, 1.5 hrs.) Morton F. Arnsdorf, M.D.
Management of Cardiac Arrhythmias-III (2, 1.5 hrs.) Morton F. Arnsdorf, M.D.
*Athletic Injuries (Jogging and Tennis) (2, 1.5 hrs.) Jeff Brooks, M.D. Washington University School of Medicine
Clinical Approach to Patients With Chronic Obstructive Lung Disease (3, 2 hrs.) Peter G. Tuteur, M.D. Washington University School of Medicine
Asthma (2, 1.5 hrs.) Robert Senior, M.D. Washington University School of Medicine
Chronic Renal Failure (3, 2 hrs.) Herschel Harter, M.D. Washington University School of Medicine
Gonorrhea (3, 2 hrs.) Lawrence Gelb, M.D. Washington University School of Medicine
Thyroid Dysfunction (2, 1.5 hrs.) Lewis Chase, M.D. Washington University School of Medicine
Understanding Nutrition (3, 2 hrs.) David Alpers, M.D. Washington University School of Medicine
The Cardiac Examination (3, 2 hrs.) John Burnside, M.D. Hershey Medical Center
Mitral Valve Prolapse (3, 2 hrs.) Alan S. Jaffe, M.D. Washington University School of Medicine
Diabetes (3, 2 hrs.) Julio Santiago, M.D. Washington University School of Medicine
Contemporary Treatment of Diabetic Keto Acidosis (3, 2 hrs.)
Bacterial Endocarditis (2, 1.5 hrs.) Leslie Miller, M.D. Washington University School of Medicine
Respiratory Failure in the Patient with Obstructive Lung Disease (3, 2 hrs.) Peter G. Tuteur, M.D. Washington University School of Medicine
A Sociological View of Selected Clinical Topics (2, 1.5 hrs.) Susan D. Tuteur, Ph.D. Belleville Area College Peter G. Tuteur, M.D. Washington University School of Medicine
Myocardial Infarction (2, 1.5 hrs.) W. Griffen Bowen, M.D. Washington University School of Medicine
Evaluation of Anemia (2, 1.5 hrs.) John C. Rodgers, M.D. Washington University School of Medicine

Hodgkin's Disease — Diagnosis (2, 1.5 hrs.) Gordon Phillips, M.D. Washington University School of Medicine
Hodgkin's Disease — Treatment (1, 1 hr.)
Rheumatoid Arthritis (2, 1.5 hrs.) Robert Karsh, M.D. Washington University School of Medicine
Acute Renal Failure (3, 2 hrs.) Douglas Norman, M.D. University of Oregon School of Medicine, Terry B. Strom, M.D. Harvard Medical School

Seminars with a * may not be ready for release. Please contact Milliken for further information as to their availability.

3. PSYCHIATRY

Each seminar has been reviewed and field tested by an Editorial Board composed of members of the Department of Psychiatry, Washington University School of Medicine.
The first number in parentheses after the title indicates the number of courseware diskettes in a particular seminar. The second number indicates the number of Category 1 credit hours which can be earned.
Alcoholism (3, 2 hrs.) Donald Goodwin, M.D. University of Kansas School of Medicine
Interviewing Patients with Emotional Complaints (3, 2 hrs.) John E. Helzer, M.D. Washington University School of Medicine
Convulsive Theraples (3, 2 hrs.) Max Fink, M.D. State University of New York at Stony Brook School of Medicine
Diagnosis of Organic Mental Disorders (3, 2 hrs.) Ronald L. Martin, M.D. Washington University School of Medicine
Suicide — Recognition and Prevention (Recognition and Prevention (2, 1.5 hrs.) George E. Murphy, M.D. Washington University School of Medicine
Clinical and Familial Aspects of Depression (2, 1.5 hrs.) Robert M.A. Hirschfeld, M.D. National Institute of Mental Health
Sleep Disorders (2, 1.5 hrs.) David J. Kupfer, M.D. University of Pittsburgh School of Medicine
Tardive Dyskinesia and Related Neuroleptic-Induced Reactions (3, 2 hrs.) Sheldon H. Preskorn, M.D. University of Kansas Medical Center
Neuroleptic Drugs (2, 1.5 hrs.) Leo E. Hollister, M.D. Stanford University School of Medicine

4. UROLOGY

The Urology Series has been developed under the direction of the Audio-Visual Committee of the American Urological Association, Inc.
As an organization accredited for continuing medical education, the American Urological Association, Inc. certifies that this continuing medical education activity meets the criteria for 1 hour of Category 1 credit (American Medical Association) per diskette toward the American Urological Association's certificate of continuing medical education and also toward the Physician's Recognition Award of the American Medical Association provided it is used and completed as directed.
Management of Bladder Cancer (2, 2 hrs.) Carl A. Olsson, M.D. Boston University Medical Center
Evaluation and Management of Male Subfertility (1, 1 hr.) Larry I. Lipshultz, M.D. University of Texas Medical School of Houston
Disorders of Sexual Differentiation (Ambiguous Genitalia (1, 1 hr.) Edmond Gonzales, M.D. Texas Children's Hospital Houston
Evaluation of the Recurrent Stone Former (1, 1 hr.) Martin I. Resnick, M.D. Bowman-Gray School of Medicine
Non-Surgical Management of the Recurrent Stone Former (1, 1 hr.) Donald Griffith, M.D. Baylor College of Medicine

TITLE: MICROCOMPUTERS and PHYSIOLOGICAL SIMULATION
PUBLISHED BY: ADDISON-WESLEY

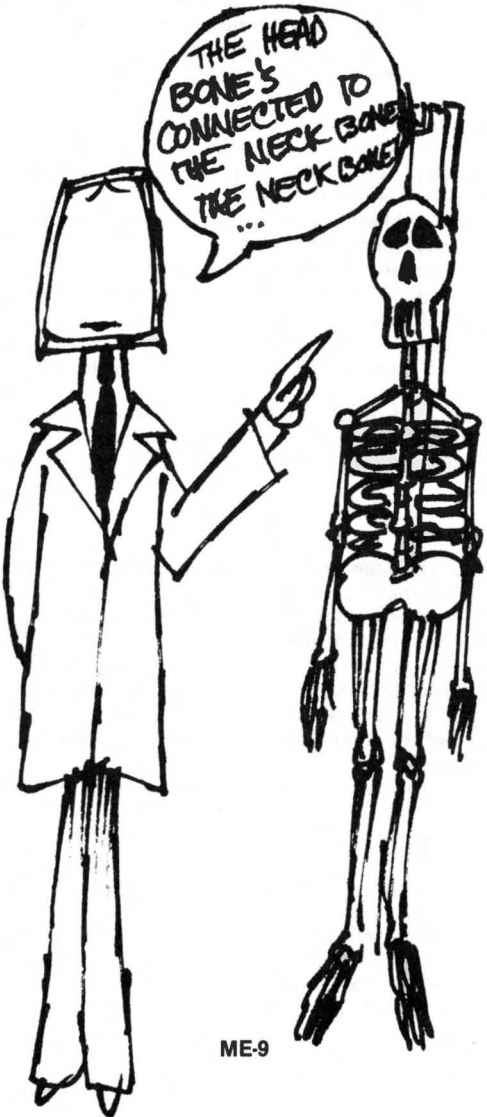
James E. Randall, Indiana University School of Medicine, Bloomington
Foreword by Arthur C. Guyton, University of Mississippi School of Medicine, Jackson

This book provides microcomputer hardware and programs suited for teaching simulations such as nerve action potential, cardiac action potential, cardiovascular system mechanics, and the glucose tolerance test.

"Sorely needed for those of us who are just beginning to adapt microprocessors to teaching applications in Physiology. Dr. Randall is eminently qualified to do this special job. He has interacted for several years with his potential readers through his activities in the American Physiological Society."

Feb. 1980, 250 pp. illus. Paper 06128.

PRICE: $14.50, Price is subject to chage without notice.



MUSIC

Alpha 2 ..... M-1
Alpha Syntauri™ M-2
AMD — The Assistant Music Director M-2
Apple Music M-3
Apple Music I — 9 Voices M-3
Apple Music M-3
Apple Music Theory M-3
Appleodion M-4
Apple II Organ M-4
Apple Piano M-5
Appletalker M-5
Auto Digisong Player M-5
Christmas Caroler M-5
Color Organ M-5
Digisong Paks M-6
Forte' M-6
Introl Super Voice M-6
Melodious Dictator M-6
Micro Composer M-6
Micro Music Songs M-7
Moog Synthesizer M-8
Music Board M-8
Music Box M-8
Music Composer M-8
Music Kaleidoscope M-9
Music Machine Nine M-9
Musicomp M-9
Musicsystem M-10
Songs in the Key of Apple M-10
Soundware Music Box M-10
Super Sound M-10
Talking Disk M-10
Tones M-10
The Voice M-11

This section contains music related software and hardware. See Peripherals for other sound related hardware and devices.

TITLE: ALPHA 2
PUBLISHED BY: SYNTAURI

The "Apple Music II" is a simple music synthesizer with price and performance designed for the hobby market. With a suggested list price of only $195.00 ($21.67 per voice), this synthesizer is easily one of the lowest priced synthesizers of its class. Although the synthesizer is somewhat limited by the necessities of enonomics, each feature available as been exploited virtually to the limits of the hardware and of the Apple II computer it plugs into.

The synthesizer consists of a circuit card, an audio output cable, software on tape or disk, and an owner's manual. (The manual is available separately for product evaluation, see details in this section.) The circuit card is designed to plug into an Apple II computer (manufactured and sold by Apple Computer Inc.), and the audio output cable connects to this card and to a home stereo system. The software tape or disk contains programs which are loaded into the Apple. These programs are used to easily enter songs from sheet music and play them back.

The circuitry of the synthesizer consits of nine nearly identical "channels". Each channel can produce about a thousand different pitches, ranging from about 62.5 Hz to about 64,000 Hz. The software allows production of a 7 octave range which starts at the lowest C on a standard piano. The pitch can be produced at any of 16 volume levels, which increase exponentially. Nine independent pitches can be played at once. When using a stereo sound system, three voices are heard on the Left, three voices in the Middle (on both Left and Right), and the remaining three voices are heard on the Right. One voice from each stereo position can either produce normal tones, or can be used to create "white noise" percussive effects.

The programs provided allow for the convenient entry of songs from standard sheet music, and for song playback. Notes can be entered for the 7 octave range. Whole notes through sixty-fourth notes (plus dotted and triplet notes) can be entered and tied to other notes. Entered notes are shown on a television display in standard musical form. Typing is minimized by an interactive graphics system which uses the two rotary knobs of the Apple computer to select note types and positions on a treble and bass staff. Errors made during entry are easily detected since each pitch is played by the synthesizer as it is entered, and measure bars are automatically drawn at the correct places. Key signatures are easily specified, and notes entered are automatically corrected for the current key.

Once entered, songs can be saved on cassette tapes or on disk (if the Apple is equipped with a DISK II). Since the song is written on the tape or disk in a special digital format, there is no degradation of sound quality. Each performance sounds exactly like the first. Corrections and additions can be made at any time. Songs entered by ALF and by other ALF snythesizer owners are available in this digital format in our ALF ALBUM tape and disk series. Songs entered for the 10-5-16 Apple Music Synthesizer can also be played back on the 10-5-1 Apple Music II.

Differences between the Apple Music Synthesizer and the new Apple Music II are as follows. TUNING ACCURACY: The AMS has excellent tuning accuracy (within 2 cents over 8 octaves) whereas the tuning accuracy of the AM II is reduced (worst case for half-tones is 33 cents in the top octave, but accuracy increases in the lower octaves to a worst case of about 1.5 cents). The AMS can produce about 65,500 different pitches whereas the AM II can produce 1,023 pitches. FREQUENCY RANGE: The AMS has an 8 octave range starting at 27.5 Hz (the lowest note on a piano). The AM II has a 7 octave range starting 3 half-tones higher. VOLUME CONTROL: the AMS has a 78 dB volume span with 256 exponential levels (similar to 8,160 liner levels). The AM II has a 28 dB volume span with 16 exponential levels (similar, but AMS envelopes are smoother since the AMS has 256 volume steps to the AM II's 16. AUDIO OUTPUTS: both are

designed for use with a customer-supplied amplifier and speakers (stereo system). The AMS has stereo when two or three cards are used; the AM II has stereo outputs. NUMBER OF VOICES: The AMS has 3 voices per card and 3 cards can be used for a maximum of 9 voices. The AM II has 9 voices and only one card can be used. SOFTWARE: ENTRY and PLAY are similar for both synthesizers. The AM II has a "FUZZ" command for white noice control and does not need a distinction between STEREO:2 and STEREO:3. (There are other small changes as well.) The AM II is not provided with an INTRODUCTION program or the CHROMA subroutine.
PRICE: AMS $265.00 ($88.33 per voice)

TITLE: ALPHA SYNTAURI™
PUBLISHED BY: SYNTAURI LTD.

The alphaSyntauri™ musical instrument was designed by Charlie Kellner to be a musical tool for performing, educating, and composing. The hardware is deliberately simple: the software is modular and flexible—and is the heart of the alphaSyntauri™ system.
How does it work? Your Apple computer looks at the alphaSyntauri™ keyboard every five milliseconds. When it sees a key depressed the software running on the Apple sets up note control information for the sound synthesizer board(s). The software then follows the note through, updating the control signal every five milliseconds according to the parameters preset for the note.
Parameters over which you have control are the envelope (note loudness over time), the octave range, the note percussion, vibrato, and sustain. The timbre (or instrument) which you hear is created when you manipulate the envelope's six sections. You can specify tone qualities ranging from a smooth legato to percussive effects which defy analogy to conventional instruments.
The alphaSyntauri™ operating system requires no more then six Kbytes of space. Each preset (envelope parameter) needs 32 bytes of storage, and each note stored uses no more than 4 bytes. A 48K Apple can store over 7000 notes in RAM during a typical record/playback session.
What equipment do you need? A 48K Apple II or Apple II Plus, a disc drive, a color CRT, and two ALF (Apple Music Synthesizer boards) are basic equipment. You will also need a stero or mono amplifier and speaker(s). Headphones are handy, too, for practice sessions. A rugged shipping/carrying carton comes with every alphaSyntauri™. Your musical instrument is as portable as your computer!
PRICE: $1295.00

TITLE: AMD — THE ASSISTANT MUSIC DIRECTOR
PUBLISHED BY: MEDIA SERVICE CONCEPTS

"MUSIC SCHEDULER" provides a fast way to plan rotations for current music lists.
"THE REPORTER" lets you compile retail sales and trade reports via computer.
"REQUEST" quickly tabulates music requests, then sorts them by caller demographics.
"FORMAT" enables you to plan music with a color graphic clock hour wheel.
"SEQUENCE" is a music formatter designed for stations that prefer continuous sequence systems.
Your Assistant Music Director can make life a lot easier. It will help you with the routine tasks that now consume time. And it will offer added flexibility and insight.
Now you can enter retail store and trade information directly to the microcomputer system. Determine the weighting for each store, then run different reports arranged the way you want them.
With this package it is easy to keep tabs on music requests. And you can try out

different music mixes on computer—using either a clock hour wheel or continuous music sequence—before they hit the air.

TITLE: APPLE MUSIC
PUBLISHED BY: ALF

SIMPLICITY
Most music systems make you memorize octave numbers and cryptic note codes like QFS3. With the graphics based system invented by ALF, you just position notes on the screen with the game paddles.
ADVANCED FEATURES
With ALF's Entry Program, you can quickly and easily insert, change, and delete notes; add new parts (up to nine); change time and key signatures; repeat sections or make "rounds"; and change sound parameters at any point in the song.
QUALITY
ALF has been selling personal computer synthesizers longer than anyone else. We won't settle for anything less that top quality.
HARDWARE
Our three-voice (model 10-5-16) sythesizer was the first Apple compatible music product and is still the most advanced music sythesizer available for the Apple II computer. It simply plugs into your Apple and your home stereo system-complete integer BASIC software is provided (Applesoft version available at slight extra cost).
PRICE: 265.00

TITLE: APPLE MUSIC I — 9 VOICES
PUBLISHED BY: A L F PRODUCTS
PROCESS - Advanced editing functions. - $49.95
ALBUM 1 - 16 songs - $14.95
ALBUM 2 - 12 songs - $14.95
ALBUM 3 - 12 songs - $14.95
APPLE MUSIC II - demo record - $1.00
BASIC EAR-TRAINING SKILLS - for the AMS - $49.95

TITLE: APPLE MUSIC
PUBLISHED BY: COMPUTER COMPONENTS
Allows you to play any musical configuration from Bach to rock. It gives the Apple a range of three octaves, C4 thru C7, which you can manipulate in any order you like. Notes can be entered as they appear on sheet music or you can compose yur own songs. Note values can be set from 16th to double whole notes giving a wide range of flexibility. Also, tempo can be set to three different speeds.
PRICE: 15.00

TITLE: APPLE MUSIC THEORY
PUBLISHED BY: APPLE COMPUTER INC.
Apple Music Theory is a series of clever programs that make it interesting to learn music fundamentals. Developed for Apple by music teachers from the Minnesota Educational Computing Consortium (MECC), the programs use the superb graphic and sound capabilities of your Apple II or Apple II Plus to generate tones and display "sheet music" on a video monitor. Because you can both hear and see the music, as well as repeat and practice lessons easily, you

can quickly learn what otherwise might take dozens of private lessons to master.
Designed for teenagers and up, Apple Music Theory is an excellent teacher, whether you're starting from scratch or simply reviewing forgotten concepts. The programs provide challenging drill and practice exercises for scales, chords, sharps and flats, half-tones, intervals, and other music elements. Apple Music Theory also keeps track of performance, so you can identify weak areas and gauge your progress.
Apple Music Theory is the perfect teaching aid for anyone interested in grasping music fundamentals — from the child who is just beginning to learn, to the adult who simply wants a refresher course.
APPLE MUSIC THEORY ...
• Frees you from music lesson appointments, by providing personalized drills that always fit your schedule ...
• Allows you to progress at your own pace, because you can determine the length and intensity of the lessons...
• Reinforces learning skills, because it allows you to listen to music as it's being displayed on the screen...
• Frees music instructors to work with individual students, by providing an "assistant" that handles drill and practice exercises for the whole class.
Imagine having a private music tutor at your beck and call. That's what Apple Music Theory is: an "instructor" that's available whenever you are.
Apple Music Theory lets you learn at your own pace, at home or in a classroom. And anyone can use it easily. Just insert the program diskette into your disk drive, turn on the system, and "class" begins.
The programs provide fundamental exercises in aural intervals, counting, enharmonics, key signatures, naming notes, note types, visual intervals, music terms, halves, rhythm, scales, sevenths, triads, and whole and half-step intervals.
Your Apple II or Apple II Plus generates clear tones and passages of music that demonstrate a wide range of music concepts. Bars of music are displayed on your screen, exactly as they would appear on a sheet of music. By matching the notes and other music symbols with their corresponding sounds, you can quickly learn to read and "hear" music, so that you can interpret both played and written passages.
Whether you're considering it for your school, your child, or yourself, Apple Music Theory provides a truly convenient and effective way to learn music fundamentals.

TITLE: APPLEODION
PUBLISHED BY: RAINBOW COMPUTING

This music synthesis system composes original Irish jigs, allows you to enter your own songs, and saves songs to cassette or disk. Included 3 Bach fugues (1485 notes). INTEGER. 16K. 32K.

PRICE: TAPE $10.00
DISK $15.00

TITLE: APPLE II ORGAN
PUBLISHED BY: POWER SOFT
MEMORY: 16K, APPLESOFT

Apple II Organ is an entertainment program. This program will make continuous sounds of two full octaves and five extra lower notes allowing the user to play tunes on the computer. The tune of these notes are adjusted to the highest accuracy. There are eighteen functions available to the program user.
PRICE: TAPE, 19.95

TITLE: APPLE PIANO
PUBLISHED BY: CREATIVE
MEMORY: 16K

Only the flats are flat---the rest play really sharp music.
PRICE: TAPE or DISK, 14.95

TITLE: APPLETALKER
PUBLISHED BY: SOFT ONE
MEMORY: 16K

Gives your Apple the power of speech. Any Apple with 16K or more will accept voice or audio information through the cassette input port, and then digitizes and stores it in numbered tables in RAM. The stored information may then be played back using the Apple on board speaker. You can also save the tables to disc or tape for later use Audio tables or "talker tables" are created by using your cassette recorder and microphone. By using the Appletalker subroutine package (written in assembly language) and a few line of basic, you can use the talker tables you create to give any Apple program the power of speech without hardware costs.
Comes complete with all the routines and instructions needed. A Demo program is also included.
PRICE: 15.95

TITLE: AUTO DIGISONG PLAYER
PUBLISHED BY: MICRO-MUSIC
HARDWARE: DAC BOARD

Designed for just listening to a DIGISONG PAK. Run the AUTO program, load an MMI DIGISON PAK, then sit back and listen to your Apple produce music just like your favorite LP records.
PRICE: 39.00

TITLE: CHRISTMAS CAROLER
PUBLISHED BY: MUSE SOFTWARE

The perfect Christmas gift for every Apple owner. The Christmas caroler plays traditional Christmas tunes and brightens your home with a brilliantly colored Christmas tree. The tree decorations flash and change color in time with music. Plus your own personalized Christmas greeting is moved across the bottom of the TV screen in a continuous loop. Enjoy the two Christmas Carols included on this tape or follow the easy to understand instructions to enter your own favorites directly from sheet music.
PRICE: $9.95

TITLE: COLOR ORGAN
PUBLISHED BY: PROGRAM SOFTWARE

Create a color show. Uses audio input to sense sound. See your music as you never have seen before. Light Show.
PRICE: 9.95

TITLE: DIGISONG PAKS
PUBLISHED BY: MICRO-MUSIC

Disk albums of musci especially arranged for the MUSIC COMPOSER system. Each DIDGSONG PAK contains 10-20 selections. PAKS currently available include: Dixieland Swingers, Oldies-But-Goodies, J. S. Bach Sampler, Hymn Favorites, MMI Disco, and Christmas Pak.
SPECIAL FEATURE: In addition to the music, the Christmas Pak includes six colorful Christmas scenes with printed Christmas messages. This can easily be programmed to personalize the messages for your family and guests.
PRICE: 19.00 EACH

TITLE: FORTE'
PUBLISHED BY: SOFT ONE

A music language, written like basic, you can use line numbers for your notes. You can trace line numbers or notes. You can even print the words of any song. Save your sone to your Disk.
PRICE: Disk 19.95

TITLE: INTROL SUPER VOICE
PUBLISHED BY: MOUNTAIN HARDWARE

Voice control/Graphic Response. See Super Talker in Peripherals section.
PRICE: $50.00

TITLE: MELODIOUS DICTATOR
PUBLISHED BY: MICRO-MUSIC

Teaches the student to hear melodies and notate each note on a music staff - skill development in leodic dictation . MMI has designed the program with all the flavor of a TV game. Users can enjoy the fun of playing Melodious Dictator with its visual displays, game paddles, phaser guns, and other sound effects while developing ear training skills. A unique feature is the capability of continuously monitoring and adjusting to the student rate of achievement.
PRICE: 120.00

TITLE: MICRO COMPOSER
PUBLISHED BY: MICRO-MUSIC

An Apple II compatible, low cost music system designed by the folks at MMI for music lovers and students alike. If you thought player pianos were fun, just try the MICRO COMPOSER software/hardware package that turns your Apple into an instant player computer. Instead of paper music rolls, we've got DIGISONG PAKS for all styles of music. If you've the urge to compose your own songs to play, you can use the MICRO COMPOSER's simple music entry system. The music software was designed by leading experts in music education and has been well tested in the classroom. A simple step-by-step instruction manual leads you through entering, displaying, editing, and playing music with up to four voices - soprano, alto, tenor and bass. You can change the sound of each voice to reed, brass, string, or organ sound and you can even color your music sounds. The MICRO COMPOSER lets you ... PLAY up to 4 simultaneous VOICES, See all 4 voices at the same time you're hearing the music - a must for music editing. Enter music notes by a fast simple and well tested coding system. The COMPOSER is smart. It tells you when you've entered a wrong code and keeps track of rhythmic durations. Program the Pitch, Rhythm, and Timbre of the music. The Tempo is varied by the Apple paddle. Choose 7 different tone colors for each voice or Create your own tone color. Compose, Edit, Display, and Play

music through an interactive, command-driven language that's easy to learn. Save your Music on disk or cassette. Hear quality music sound at low cost through the APPLEDAC music card. It's fun. The MICRO COMPOSER comes complete with an instruction manual, software disk (or cassette), and the Appledac music card. Just plug the Appledac into the Apple expansion slot and connect the audio cable to an 8 ohm speaker. To play your favorite tunes. DIGISONG PAKS are available with music from Back to Dixieland. Pitch is a 4-octave range of 25 equal-tempered chromatic steps (65.1 Hz to 1046.5 HZ). Rhythm - The rhythmic durations are whole, half, quarter, eighth, sixteenth, and thirty-second notes and their dotted values. Coding System - A literal music code is used. For example, HGS2 is a dotted half note, G-sharp in the second octave. A QR is a quarter rest. The software checks all input for legal codes. Voices - music with 1, 2, 3, or 4 polyphonic voices may be entered into the COMPOSER. Music Entry - Music is entered in vertical sound sets. A music set represents one time unit equivalent to the smallest note value in the music. Each set contains all of the rhythm and pitch information needed during the time unit. With 4 voice music, 744 music sets may be stored in the 8K memory reserved for music. Tempo - Tempo of the music is controlled by the Apple Paddle #0. Timbre - The Composer has 7 preset timbres; rich string, wind-flute, brass, oboe-bassoon, clarinet, electronics organ, and funky oboe. The Composer provides features for constructing and saving your own timbres. The timbres are limited to 16 harmonics and restricted to frequencies below 5Kz. Commands - The composer is command-driven. The double-question mark, ??, is the prompt for a command. The single-question mark, ?, is the prompt for data. The commands available are Play, Display, Compose, Edit, Fourier, Voices, Meter, Timbre, Read, Write, Help, and Quit. Editing - The Composer permits quick editing of any set. In the edit mode the stored music set is displayed as well as the new music set being entered. The button on the Apple Paddle #0 lets you stop and start the music at any point. With the button depressed pushing the space bar on the keyboard returns you to command mode. Appledac Music Board - This digital-to-analog converter permits quality musical tones with a computer at low cost. Four simultaneous tones can be generated with this board and accompanying Composer software. Tones are generated using a sampling technique and waveform tables stored in memory. 32K Apple required for cassette based system and 48K for the disk based system.

PRICE: $179.00 (SPECIFY DISK OR CASSETTE VERSION)

PUBLISHED BY: MICRO MUSIC INC.

MICRO COMPOSER PACKAGE (CASS.)	**$179.00**
MICRO COMPOSER PACKAGE (DISK)	**$179.00**
MAESTRO'S MAGIC SPELLER	**$25.00**
MELODIOUS DICTATOR	**$100.00**
DIXIELAND SWINGERS	**$19.00**
RED HOT BACH	**$19.00**
HYMN FAVORITES	**$19.00**
OLDIES BUT GOODIES	**$19.00**
DISCO, ROCK AND JAZZ	**$19.00**
AUTO DIGISONG PLAYER	**$39.00**
MICRO MUSIC SPEAKER	**$30.00**
DEALER DEMO	**N/A**
APPLE II SECURITY HARNESS	**$100.00**
APPLE II DISK HARNESS	**$95.00**

NOTE: Programs will run in either BASIC or Applesoft.

TITLE: MOOG SYNTHESIZER
PUBLISHED BY: C.S.G.
MEMORY: 4K
This program is written Integer BASIC and in 6502 machine language. The two game paddles are used to control the pitch and rhythm to drive the Apple speaker. With practice, some interesting and original "Moog" type compositions can be obtained. Includes target shoot.
PRICE: 4.95

TITLE: MUSIC BOARD
PUBLISHED BY: PROGRAMMA
FEATURES
Three simultaneous voices
One white noise generator
Directly drive up to one 8 ohm speaker (no amplifier needed)
A total of six boards can be installed to generate 18 notes.
Stereophonic, quadriphonic and polyphonic operation.
Boards can be daisy chained to increase the number of notes per speaker
Comprehensive interactive software enables musical notes to be input directly from keyboard.
Music can be composed, edited, played and stored on tape or disk.
Each unit is shipped completely assembled and tested. Included with the Music Board is a detailed instruction manual, interactive software, cassette and sample music programs.
PRICE: 129.95

TITLE: MUSIC BOX
PUBLISHED BY: MUSE
Start the Music Box and your Apple comes alive with sound and color. Play it as a three octave instrument or type in a song and the Music Box will play it for you! A brilliant full color light show accompanies the music. Standard musical notations includes sharps and flats, note time, rests, dotted notes and tempo. All notes can be easily retuned from the keyboard to produce special sound effects. Comes with two songs and documentation that explains basic musical notation.
PRICE: TAPE, 12.95

TITLE: MUSIC COMPOSER
PUBLISHED BY: MMI
MEMORY: 32K TAPE, 48K DISK
HARDWARE: DAC BOARD
Includes MMI DAC Music Board. Disk or Cassette, and User's Manual in a 3-ringed binder. MMI Music Composer is an Apple II compatible music composing and editing system. This package provides 1) capabilities for composing music from one to four voices within a four octave range, 2) variable waveforms for timbre control, and 3) rhythmic durations from a whole to a thrity-second note. Study and editing is made possible by displaying music in standard notation on the TV screen while it is being played.
PRICE: 220.00

TITLE: MUSIC KALEIDOSCOPE
PUBLISHED BY: SOFT ONE

Create a fascinating color light show using your Apple II computer. Using any ausio input to the cassette port, this program will display many colored patterns for your enjoyment. Each pattern is unique to each input. Written in machine language for speed, you can use input from your stereo to produce a demonstration unlike any other. Use it at your next party and show your friends the abilities of your computer. Music Kaleidoscope is easy to use and self-documented.

PRICE: 9.95

TITLE: MUSIC MACHINE NINE
PUBLISHED BY: VISTA MEDIA PRODUCTS

Using LSI (large-scale integration) technology, the device can produce nine voices on the Apple II computer. The board uses three AY3-8910 integrated circuits and requires one expansion slot. It can use software now available to produce and play back nine-voice music compatible with other music boards. It will respond to commands for pitch, amplitude, duration, attack, delay, and more. Two high-impedance, low-level outputs are provided with six voices assigned to each channel.

TITLE: MUSICOMP
PUBLISHED BY: APPLE COMPUTER INC.

Looking for a way to express the music in your soul? Roll over, Beethoven! Musicomp provides an electronic music sheet that lets you compose, arrange, store and play your very own tunes, using the Apple's built-in speaker, or an external sound system. Musicomp also turns your Apple II or II Plus into a coin-free "computer jukebox," with 24 sample selections that demonstrate the kinds of compositions you can create with the program.

If you've had any training in music or music theroy, you can quickly begin using Musicomp to play, record, and edit your own compositions. And even if you don't have much musical aptitude, you can enjoy Musicomp's pre-programmed tunes, while showing off your Apple in a unique way.

Musicomp: lets you edit your compositions note by note ... so you get precisely the music you want; displays each note it plays on a music staff centered on your screen ... so you learn music symbols as you hear their corresponding sounds; can be connected through the cassette output jack to a stereo system, letting you use your personal computer to play music, with or without adding expensive equipment.

Musicomp's Play and Create options allow you to key in your own music, edit it, store, recall, and play it back. Use your Apple keyboard as you would a piano keyboard—over a full four-octave chromatic range.

In addition to setting key and time signatures, you also set the tone of every piece you create. Musicomp has three "voice" and four "timbre" settings that alter tone, allowing you to arrange as well as compose. One combination of settings produces a tone suggestive of woodwinds, for example, while another combination sounds like a harpsichord.

Musicomp is written in Integer BASIC. To use it, you need: an Apple II with 32K bytes RAM; or an Apple II Plus with 32K bytes RAM and an integer BASICS Firmware Card; or an Apple Plus with the Apple Language System. Plus: Auto-Start ROM; an Apple Disk II controller (16-sector PROMs); a video monitor or television.

With the Musicomp package, you'll receive: 1) Musicomp program diskette; 2) instructions.

PRICE: $45.00

TITLE: MUSICSYSTEM
PUBLISHED BY: MOUNTAIN HARDWARE

MusicSystem generates the sound of any musical instrument—real or imagined! Solo or sextet. Rock or classical. Laid-back or loud. At home or in the concert hall or classroom. MusicSystem sets new standards for computer generated music.
Digital Synthesizer with 16 voices. Stereo output. Polyphonic-multi-voice chords and note sequences. Additive synthesis of instruments. Waveforms, envelopes,

TITLE: SONGS IN THE KEY OF APPLE
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Lopatin) Allows you to see and hear your favorite tunes, pre-programmed tunes or music you create (up to 200 notes, including rests, per musical piece). 03304, Apple II tape
PRICE: $10.95

TITLE: SOUNDWARE MUSIC BOX
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Generates sound effects for games or may be programmed independently for a wide variety of audio experiences. 8-32K.
PRICE: $29.95

TITLE: SUPER SOUND
PUBLISHED BY: RAINBOW COMPUTING

SUPER SOUND is a machine language program which you can use to produce a wide variety of squeaks, groans, howls, and roars. Of course you can use it for musical sounds, but its primary purpose is to produce the complex sounds found in such things as thunder and automobile engines. The machine language program can be accessed from any integer BASIC or Applesoft program (with certain memory restrictions) to add the rich dimension of sound to your programs. You can use SUPER SOUND's built-in explosions, gunshots, sirens, etc., or you can use the noise and tone generators to create your own sounds. The package comes complete with documentation and a demo Applesoft program. APPLESOFT/ASSEMBLY. 16K.
PRICE: TAPE $12.95

TITLE: TALKING DISK
PUBLISHED BY: PROGRAMMA

Boot-up your TALKING DISK, and it will actually talk to you! The disk includes software enabling you to create your own programs that talk.
PRICE: DISK, 19.95

TITLE: TONES
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

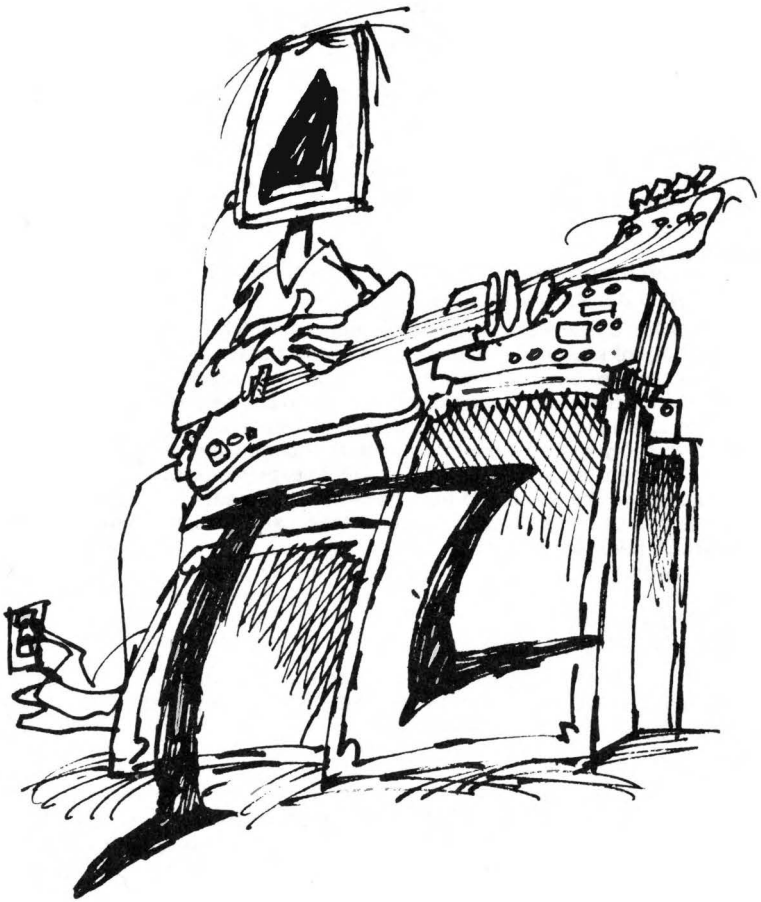
This program allows you to make your own music and sound effects with the game paddles. One paddle controls the pitch of the tone, the other controls the duration. No special hardware is required.

TITLE: THE VOICE
PUBLISHED BY: MUSE SOFTWARE

The Voice gives your Apple the power of speech. Use the standard vocabulary to speak an endless combination of phrases and sentences, or easily record your own vocabu-set to make your Apple say anything you like. Each data disk can store up to 80 words or phrases which can be sorted for quick reference. What's more, the Voice allows you to speak from any Basic program by using Print commands.

48K.

PRICE: $39.95



PERSONAL/HOME USE

This section contains programs that might be of interest for you at home or for family use. There are basic entry levels for new users and include many good day-to-day uses that will make life a little more enjoyable and record keeping a little easier. The whole family can use the Apple at home with these applications.

Address Book PH-1
Address File Generator PH-1
Almanac PH-1
Apple Magic Lantern PH-1
Apple Menu Cookbook PH-2
Applerоots PH-3
Astroapple PH-3
Astrology Program PH-3
Astro-Scope PH-4
Auto Records PH-4
Biorhythms PH-4
Birthday PH-5
Calendar PH-5
Calorie Counter PH-5
Calorie Counter PH-5
Clinic PH-5
Checkbook PH-6
Checkbook Balancing PH-6
Checkbook with Financial Data Base Management PH-6
Check Verification Program PH-6
Check Writer PH-6
Computer Literacy PH-6
Diet Planning Package PH-7
Disk Checkbook Register PH-7
Expense Account File PH-7
Family Financial Planner PH-7
Family Package PH-8
Family Tree Teacher PH-8
Financial Analyzer PH-8
Financial Wizard PH-8
Financial Wizard II PH-8
Financial Wizard IV PH-8
Five Minute Financial Check-Up PH-8
Giant Letter Sequences PH-9
Grocery List PH-9
Home Inventory File PH-9
Home Money Minder PH-9
Home Purchase Analysis PH-9
I Ching PH-10
Income Property Cash Flow Leverage PH-10
Index-Card File PH-10
Index-File PH-11
Interlude PH-11
Inventory PH-11
Know Yourself PH-11
Life Expectancy PH-11
Magazine File PH-11
Mailing List Program PH-12

Memo Calendar PH-12
Micro Memo PH-13
Mortgage PH-13
Mortgage with Prepayment Option/Financier PH-13
Name and Address PH-13
Nutri-Pack PH-14
Perpetual Calendar PH-14
Personal Accounting System PH-14
Personal Accounting System I PH-14
Personal Accounting System I PH-14
Personal Expense Record PH-15
Personal Finance Manager PH-15
Personal Finance Package PH-16
Personal Secretary Package PH-16
Personal Record Program PH-16
Personality Profile PH-16
Phone Directory PH-17
Professional Disk PH-17
Programmed Exercises PH-17
Psychotherapy PH-18
Real Estate Game PH-18
Sounding Board PH-18
Source PH-18
Super Checkbook PH-20
Super X-10 Mod PH-20
Tarot Cards PH-21
TV Typer PH-21
Things To Do PH-21
Transactional Analysis PH-21

PERSONAL/HOME USE/SUGGESTIONS

PERSONAL & FAMILY BOOKEEPING
Address Book
Address File Generator
Auto Records
Calender
Check Book
Check Book Balancing
Check Book with financial
  Data Base Management
Check Verification Program
Check Writer
Disk Check Register
Expense Account File
Family Financial Planner
Family Package
Financial Analyzer
Financial Wizard
Financial Wizard II
Financial Wizard IV
Five Minute Financial Checkup
Hope Inventory File
Home Money Minder
Home Purchase Analysis
Income Property Cash Flow
  Leverage
Index Card File
Index-File
Inventory
Mailing List Programs
Memo Calendar
Micro Memo
Mortgage
Mortgage with Prepayment Option
Name Address
Perpetual Calendar
Perpetual Calendar
Personal Account System
Personal Accounting System I
Personal Expense Record
Personal Finance Manager
Personal Finance Package
Personal Record Program
Phone Directory
Super Check Book
TV Typer
Things to do

ENTERTAINMENT
Apple Magic Lantern
Apple Roots
Astro Apple
Astrology Program
Astro Scope
Biorythms
Birthday
Computer Literacy
Giant Letter Sequences
Interlude
Personality Profile
Real Estate Game
Sounding Board
Tarot Cards

SELF HELP
Calorie Counter
Calorie Counter
Clinic
Diet Planning Package
Family Tree Teacher
Know Yourself
Life Expectancy
Nutri Pak
Professional Disk
Programmed Exercises
Psychotherapy
Transactional Analysis

TITLE: THE ADDRESS BOOK
PUBLISHED BY: MUSE
MEMORY: 48K
HARDWARE: APPLESOFT ROM OR APPLE II PLUS

Stores names, addresses and telephone numbers on disk and accesses them quickly to print mailing labels on any standard printer. But that's not all! With the addition of a D.C. HAYES MICOR-MODEM, the ADDRESS BOOK is an automatic telephone dialer. Even without a printer or modem, THE ADDRESS BOOK is an efficient name and address file.

Be selective - with the MUSE ADDRESS BOOK. A user definable category system allows you to classify or group records together to suit your specific needs. You can select records for viewing, label printing or automatic telephone dialing. Select by name, initials, street, city, zip code, telephone are code or record category code.

The ADDRESS BOOK lets you store up to 700 records on each data disk, and features an efficient sort enabling you to quickly sort hundreds of records. A variable printer format allows you to print from 1 to 6 labels across on your printer.

TITLE: ADDRESS FILE GENERATOR
PUBLISHED BY: POWERSOFT
MEMORY: 32K OF MEMORY WITH APPLESOFT ROM CARD
48K OF MEMORY WITHOUT APPLESOFT ROM CARD
HARDWARE: DISK II, APPLE PRINTER CARD

A professional piece of software which allows the user to create four different types of address files: a) Holiday File, b) Birthday File, c) Home Address File, d) Commercial Address File. The program contains a menu of seven major commands: 1) Create a File, 2) Add to File, 3) Edit File, 4) Display File, 5) Search File, 6) Sort File, and 7) Reorganize File. Up to three fields may be used for the sort criteria. Most of the major commands have subordinate commands which adds to the flexibility of this powerful software system. We doubt you could buy a better program for maintaining and printing address files.

PRICE: DISK, 19.95

TITLE: ALMANAC
PUBLISHED BY: WILLIAMSVILLE PUBLISHING COMPANY

Almanac provides Apple users with functions related to time, the calendar and general astronomy. Functions of the programs include calendar calculations, sidereal time, sunrise and sunset calculations, calculation of phases of the moon and the dates and times of solar and lunar eclipses, a high resolution graphics model of the solar system and a software real time clock. It requires an Apple II with at least 32K RAM, Disk II and Applesoft II in ROM.

PRICE: $29.95

TITLE: THE APPLE MAGIC LANTERN
PUBLISHED BY: APPLE COMPUTER

In the late 1800's, powerful projectors were used to show lantern slides of famous scenes, persons, and drawings on the flat bases of clouds over our major cities. By the middle 1900's anyone could have a "slide projector" in their own home, and take slides by the hundred with almost any camera. But in the late 1970's, APPLE Computer came out with slide shows that you can show on any TV set. They demonstrate the APPLE'S unmatched capability to

present highly detailed and even photographic type pictures.
1. Musical notation with drawings of instruments obbligate
2. A map of the world. Careful observers will find a new continent.
3. A handsome woman's face.
4. An isomorphic view of a double Bessel function with hidden line supression. Or, it you rather, a fantasy landscape.
5. Uncle Same, who can tapdance.
6. Joe sent me. . . .
7. Spirallellogram. Whatever that is . . .
8. Rocky Raccoon
9. A neat set of characters that can be generated on the APPLE II. You can get upper case and lower case - at least in a drawing.
10. One United States Dollar. Well, most of a dollar.

PRICE: CASSETTE 10.00
DISK, 10.00

TITLE: APPLE MENU COOKBOOK
PUBLISHED BY: PROGRESSIVE
MEMORY: 16K

This is an index-accessed data storage/retrieval program. Recipes (or menus) are stored inany of 61 files. On entering a file, all titles are displayed and the user is asked to select where he would like to enter. A simple hit of the space bar or 1 or 2 will cause the file to be paged forward or in reverse.

Data is entered in 40 character lines with no limit to the number of line per entry. Easy editing of files is a basic part of the program as well as overall erase commands.

Apple Menu Cookbook is formulated after the New York Times cookbook and appendix containing conversion tables, calorie references, and many other useful features are included.

PRICE: 19.95

TITLE: APPLEROOTS
PUBLISHED BY: CDS CORPORATION

AppleRoots helps you to organize your Genealogy (or Animal Breeding) records. Completely menu-driven with prompts so that even a novice can use it like an expert. Stores 260-350 records per disk. Only needs 24K and one disk drive. Written in Applesoft. Print functions: 1) Four Generation Pedigree; 2) Records by Family Group; 3) Individual Records; 4) List of children by parent; 5) Index of Records. All print functions can be displayed on the screen. 17 User-definable fields. The size and names of the fields can be easily changes - allowing you to customize your database for Genealogy or Animal Breeding.

PRICE: $39.95

TITLE: ASTROAPPLE
PUBLISHED BY: THE SOFTWARE FACTORY

Astrology is the science of correlating human behavior to the movement of the stars and planets. The mathematical calculations required by an astrologer are well suited to the computer and other programs exist which will perform these calculations. ASTROAPPLE goes beyond these mathematics and provides APPLE II owners with a mini astrologer in their own machine! The following are the features that make ASTROAPPLE unique;

NATAL HOROSCOPES (BIRTH CHARTS)

ASTROAPPLE produces a natal horoscope for each subject who has entered his or her birth data. Included in the interpretation are paragraphs describing your: personality (Sun sign), emotional behavior (Moon sign), the way others see you (Ascendent), what sign you are most attracted to, what sign you may marry, and much more!

Following the interpretation, a chart may be displayed showing the positions of the planets at the time of your birth, accurate to one half of one degree! This information may be copied directly into the familiar circular horoscope format for a permanent record of your astrological birthday. A blank horoscope and complete instructions on how to create this chart are included in the ASTROAPPLE manual.

COMPATABILITY

How compatable are you with your family and friends? ASTROAPPLE compares each pair of subjects that have entered their birth data and produces astrological ratings for physical, emotional, and intellectual compatability. The results may surprise you!

THIRTY DAY FORECASTS

ASTROAPPLE Produces a 30 day forecast for any month (or months) you choose. You are told which days may be good for business, or which days the stars say you should watch your temper and/or your pocket book!

ASTROAPPLE was developed by a former teacher of astrology with over 10 years of programming experience. It consists of two separate 12K programs written in APPLESOFT BASIC and 6502 machine language and requires a 32K or larger system. Both cassette and diskette versions are available. ASTROAPPLE comes complete with an instruction manual which helps explain the terminology and techniques of the astrologer. Never before has this complete an astrological package been available to the microcomputer owner!

PRICE: $15 on Cassette $20 on Diskette

TITLE: ASTROLOGY PROGRAM
PUBLISHED BY: AGS SOFTWARE
MEMORY: 8K

Calculates a horoscope. Planetary positions, aspects and Rising sign are calculated and displayed. This program requires the use of Ephermerides and

Table of Houses. Since the program outputs the Sidereal time, any house system may be used. Requires 8K.
PRICE: Cassette 10.00 Diskette 16.50

TITLE: ASTRO-SCOPE
PUBLISHED BY: AGS SOFTWARE

Astro-Scope goes light-years beyond the Sun-sign "horoscopes" you find in newspapers. It is an actual birth chart, cast for the exact date, time, and place as a highly paid private astrologer would do it.

This gives you a detailed horoscope of a particular person, not just one of twelve types of human being. While a computer can never match the intuition of a top-notch astrologer, it can, if programmed by people who know astrology, give the flavor of a personality, its likes and dislikes, quirks of behavior, and major strengths and weaknesses. With a little wisdom on the part of its programmers, it can also tell how to increase the good and overcome the difficult.

The qualifications of Astro-Scope's creators are first-class: calculations and part of the text are by Robert Hand, author of HOROSCOPE SYMBOLS, PLANETS IN TRANSIT, and two other bestselling astrology books. Hand was also one of the first astrologers to own a microcomputer. The other part of the text is by Steve Blake, a seasoned astrologer and popular lecturer known for his modern psychological approach.

Blake and Hand tell you about CAREER (your life goals, what you are good at, your attitudes to work, your areas of creativity), RELATIONSHIPS (how to improve them, how others see you, what kinds of people you can be happy with), FINANCES (your earning power and feelings about money), and a great deal more.

Are you buying this program as a game, to see how closely astrology can describe you and those you know? You may find that Astro-Scope reveals things you haven't even thought of — and be astonished to find that these things are true!

PRICE: $30.00

TITLE: AUTO RECORDS
PUBLISHED BY: JOHNNY APPLESEED SOFTWARE AND COMPANY

This program was developed using The APPLESOFT PROGRAMMER, it has all the nice features including the single key commands. It will process and manage all data associated with the operation and maintenance of your CAR, TRUCK or RV. Specifically it will: Manage information on the LENDER of your vehicle. Manage information on the INSURANCE AGENT of your vehicle. Keep MONTHLY, YEARLY and CUMMULATIVE TOTALS on all costs incurred in the operation of your vehicle. ANALYZE and SUMMARIZE the performance of your vehicle. Compute all TAX DEDUCTIBLE amounts for you any time during the year.

You can store data for up to 28 different vehicles on a data diskette and the cost of AUTO RECORDS is Tax Deductible! AUTO RECORDS, a very professional product.

PRICE: DISKETTE: $39.95

TITLE: BIORHYTHMS
PUBLISHED BY: CREATIVE SOFTWARE

Some say it's the only real life predictor.

PRICE: TAPE or DISK, 14.95

TITLE: BIRTHDAY
PUBLISHED BY: COOKS COMPUTER CO.

This program sings "Happy Birthday" using color, large print and sound. BIRTHDAY makes a perfect birthday present - along with an Apple II on which to run it of course.

PRICE: 7.95

TITLE: CALENDAR

Calendar will tell you what day of the week a particular date, such as your birthdate, is on.

If Saturday Nite Live stays on Saturday nites and continues for another 50 years (can you see John Belushi at the age of 84?) it will have the curious experience of being on TV on the day 2,2,2222--i.e. February 2, in the year 2,222. Just though you'd like to know. By the way, in case you didn't know, the comments section of this manual is totally optional. In fact, the who manual is optional. Actually, the whole computer is optional, but you know that, we hope. Let us move on.

See Apple Barrel Bushel #1

TITLE: CALORIE COUNTER
PUBLISHED BY: SOFT ONE

Calorie Counter provides a source for the Calorie value of commonly used foods. Upon keying in the name of the food, the calorie count of a normal serving will be displayed. Useful for menu planning for normal as well as obese diets.

PRICE: Cassette 9.50

TITLE: CALORIE COUNTER
PUBLISHED BY: VIDEO WORD

A program for the kitchen which gives you the calories of a food you input. Good program for weight watchers.

PRICE: Cassette 25.00

TITLE: CLINIC
PUBLISHED BY: G2

G/2's medical tape program offers caloric intake, longevity, and biorhythm analysis. The caloric program will quiz the user on his/her life style and weight desires. It will then advise him/her of the necessary caloric consumption in daily terms out-lined to achieve the desired loss. This program is not a diet "plan". It is a caloric advisory system. The series on longevity inquires into participant's life style, family history, and specific areas that are then statistically projected via relative tables for each variable. The third usage of the "Clinic" application examines the biorhythmic cycle and offers advice of the theoretical "best" and "worst" days by examination of the cycles. Such examination may be in listed form or can be plotted if so desired.

PRICE: Cassette 14.95

TITLE: CHECKBOOK
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
Keep accounts and records up to date. Checks may be sorted by type. Facilities for cassette storage of data. 8-32K.
PRICE: $15.95

TITLE: CHECKBOOK BALANCING
PUBLISHED BY: SOFT ONE

Checkbook balancing program. An interactive program which checks the statement balance and checkbook balance.
PRICE: Cassette 7.50

TITLE: CHECKBOOK WITH FINANCIAL DATA BASE MANAGEMENT
PUBLISHED BY: APPLE COMPUTER
MEMORY: 16K, INTEGER BASIC
Maintains a data base of transactions: the date, amount, recipient, and classification code for each item. It allows check records to be saved, sorted, searched, and displayed. Trial balances can be run, and the account can be reconciled against a bank statement. The program eliminates most of the drudgery associated with checking account management.
PRICE: TAPE, 20.00

TITLE: CHECK VERIFICATION PROGRAM
PUBLISHED BY: CM&A
MEMORY: 16K
This program is designed for retail stores having significant volumes of personal checks accepted and/or a number of clerks accepting checks sufficient to make manager approval difficult. The program presents a sample check on the screen and asks for preapproved limits and dsiplays a coded message to the clerk. The program includes a uniform credit request form for use in soliciting credit information and a secured file for data within the program. Tape or disk media version are available.
PRICE: TAPE, 49.95
DISK, 54.95

TITLE: CHECK WRITER
PUBLISHED BY: VIDEO WORLD

This program writes checks for payment of bills. It accepts up to 8 different invoices from one vendor on one check, automatically adds all entries and prints a check, one at a time. Available in either cassette or disk. The program does it's own conversion for the written out numbers of the check amount. The tabs may be changed for any check format.
PRICE: Cassette 25.00
Disk 65.00

TITLE: COMPUTER LITERACY
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE
Are you a computer whiz? Try this quiz and find out how much you know about computers and computing. On each round, answer 5 questions as quickly as possible. Depending on your score, you will be rated from janitor to a systems

analyst. Questions range from history to present technology and applications. A large number of questions ensures variety on each round.

TITLE: DIET PLANNING PACKAGE
PUBLISHED BY: MAD HATTER SOFTWARE

A three program package to help you plan a diet and stick to it. Program "A" computes what your weight should be (adults) and how many pounds you should lose. Program "B" computes your basal metabolic rate, the number of calories you need based on your daily activities and the number you are allowd in order to lose "n" pounds in "x" weeks. It finishes by giving your daily caloric intake to maintain your new weight. Program "C" helps you plan your meals by giving you the amount of calories, fat, carbohydrates, and protein in over 200 foods. This package is essential for planning a sensible weight loss program. 16K.
PRICE: $14.95

TITLE: DISK CHECKBOOK REGISTER
PUBLISHED BY: A-VIDD ELECTRONICS CO.

Posting, listing and reconciliation to the bank statement are included in the program. Complete check information is retained on the disk and searches on outstanding checks, specific date, payee, item or amount are possible. Several different accounts can be maintained on one disc.
PRICE: Diskette 35.00

TITLE: EXPENSE ACCOUNT FILE
PUBLISHED BY: DARRELLS APPLESOFT

The program enters, changes, deletes, searches (generic) and reports, with totals, on the following fields:
* Exp. No. - five alphanumeric characters used as a key record number.
* Date - six alphanumeric characters
* Code - Four alphanumeric characters used to categorize the item
* Description - twenty alphanumeric characters used to categorize to identify the exact expenditure
* Mileage - a numeric field that is totaled on all searches and reports. MILEAGE AND EXP-AMT fields cannot be searched.
PRICE: 30.00

TITLE: FAMILY FINANCIAL PLANNER
PUBLISHED BY: SOFT ONE

This program consists of six programs which may be used to compute such things as mortgage payments, college fund savings programs, investment programs, etc. It is an interactive program which asks simple questions and does highly complex calculations to give simple answers. It can replace a whole library of compound interest tables.
PRICE: Cassette 23.50
Diskette 28.50

TITLE: FAMILY PACKAGE
PUBLISHED BY: SOFT ONE

Includes the Family Financial Planner, The Calorie Counter, and the Checkbook Balancing Programs.
PRICE: Cassette 30.00
Diskette 35.00

TITLE: FAMILY TREE TEACHER
PUBLISHED BY: ATS
MEMORY:
This self learning program learns the names and facts about members of your family and teaches you and your children about your ancestors. Requires disk.

TITLE: FINANCIAL ANALYZER
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
A budgeting aid which just might make you richer.
PRICE: TAPE or DISK, 24.95

TITLE: FINANCIAL WIZARD
PUBLISHED BY: POWER SOFT
MEMORY: 16K, APPLESOFT
Financial Wizard is a home financial program. There are two sets of programs. The first program will calculate any type of annuity or mortgage payment. The second program will calculate either the interest, the present value, the future value, or the number of years for an investment.
PRICE: TAPE, 9.95

TITLE: FINANCIAL WIZARD II
PUBLISHED BY: POWER SOFT
MEMORY: 16K APPLESOFT
Financial Wizard II is a set of programs to allow an individual or small business to decide if it is worthwhile to purchase an item and determine if you will get your money back, either using a payback method, a net present value method, or an internal rate of return method.
PRICE: TAPE, 9.95

TITLE: FINANCIAL WIZARD IV
PUBLISHED BY: POWER SOFT
MEMORY: 16K, APPLESOFT
Financial Wizard IV allows the user to calculate the present value, payment per period, and number of annuity periods of an annuity. The program also allows the user to calculate a loan pay-off figure using the Rule of 78's.
PRICE: TAPE, 9.95

TITLE: FIVE MINUTE FINANCIAL CHECK-UP
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K
All your personal financial indicators checked and advice given.
PRICE: TAPE or DISK, 24.95

TITLE: GIANT-LETTER SEQUENCES
PUBLISHED BY: CONNECTICUT INFORMATION SYSTEMS
MEMORY: 16K

Brilliantly-colored letters, of full screen height appear one-at-a time, in se-quence, to spell out messages, the color of Successive Word,s progresses through the Apple rainbow. A running summary of letters appears in the bottom four screen lines, as the giant letters are presented. 16K.

PRICE: 8.00

TITLE: GROCERY LIST
PUBLISHED BY: D.R. JARVIS COMPUTING

An easy-to-use, self prompting program that lets the user scan a Master File of up to 500 grocery and related items. With a single key-stroke the shopper may select the quantity and item desired. Prints a shopping list organized by table number, section number, or department, such as "DARY", "DELI", or any other four letter code. The code is user defined. Over 150 items on a Master File are included. A Master File Editor is also included.

PRICE: $19.95

TITLE: HOME INVENTORY FILE
PUBLISHED BY: DARRELLS APPLESOFT

The program enters, changes, deletes, searches (generic) and reports (with totals) on the following fields:

*ID NUMBER - ten alphanumeric characters
*MANUFACTURER - fifteen alphanumeric characters used for manufacturer's nMW
*DESCRIPTION - thirty nine alphanumeric characters
*DATE PURCH. - ten alphanumeric characters for date purchased
*QUANT - number of items purchased
*EXT-AMT - an automatic extension of QUANTITY and AMOUNT.

PRICE: 30.00

TITLE: THE HOME MONEY MINDER
PUBLISHED BY: CONTINENTAL SOFTWARE

Transactions for month by each type of expense; check, credit card & cash. Transactions for month by check, credit and cash sorted by budget category. Bank reconciliation. Budget for year. Comparison of total expenses for month and year to date sorted by budget category.

PRICE: $34.95

TITLE: HOME PURCHASE ANALYSIS
PUBLISHED BY: REALTY SOFTWARE

This program is designed to aid home buyers and sellers, investors and real estate brokers in making knowledgeable decisions when buying, selling and comparing properties.

The analysis considers the effects of insurance, property taxes, utility expenses, interest expenses, closing sosts and debt service on the total amount of cash necessary for purchase and the total monthly payment. The analysis also calculates the return on investment and the actual leverage achieved based on a user estimated annual appreciation rate.

As many scenarios as desired may be analyzed varying the amounts down,

payment, second financing, interest rates, appreciation and other pertinent purchase criteria. Studies may be done on several potential investments allowing a very thorough financial comparison of the properties involved and an analysis of the best method of financing.
Analysis may be optionally printed for a permanent record.
PRICE: TAPE or DISK, 20.00

TITLE: I CHING
PUBLISHED BY: PROGRAMMA

This program will cast two figures called 'hexagrams' and it will interpret, each hexagram is make up of six lines numbered from the bottom. Each line may then, according to the ancient Chinese "Book of Changes' of I CShing, be either whole or broken, and each combination of whole and broken lines carries a different meaning. Casting involves the generation of two hexagrams, called the changing and thr resultant hexagrams. The changing hexagram describes the question and its implications. The resultant hexagram describes the results of the actions implied by the changing hexagram.

PRICE: CASSETTE. 15.95
DISK, 19.95

TITLE: INCOME PROPERTY CASH FLOW LEVERAGE
PUBLISHED BY: REALTY SOFTWARE

This program is designed to aid both investors and real estate brokers in making knowledgeable decisions when buying, selling, and comparing income properties.
The analysis considers the effects of insurance, property taxes, utility expenses, interest expenses, closing costs and debt service on the total amount of cash necessary for purchase and the total monthly payment. The analysis also calculates the return on investment and the actual leverage achieved based on user estimated annual appreciation rate.
PRICE: DISK or TAPE, 20.00

TITLE: INDEX-CARD FILE
PUBLISHED BY: SOFTAGE

The electronic index card-file uses the Apple disk to store 'index cards' which are 12 lines long and 40 columns wide. These 'cards' are easily changed and are automatically sorted in alphabetical order by the program. This very useful program comes with a complete instruction book and is available on either tape or disk.
The applications are endless; from storing recipes, cataloging records or keeping track of student grades and scores. By Bob Bishop. 16K Integer Basic
PRICE: Disk 9.95

TITLE: INDEX FILE
PUBLISHED BY: PROGRAMMA

This program, which is an electronic index card file, allows you to creat a card file for any purpose. You can add, delete, edit and list cards and also rename your lines. The QUIT command saves cards and closes files. Files may be searched by line name or by keyword.
PRICE: DISK, 29.95

TITLE: INTERLUDE
PUBLISHED BY: INTERLUDE

That's Interlude - the hottest new software program for personal computers. But it's more than just a game. It's an experience that will tantalize you .. romanticize you ... fantasize you ... and often surprise you.
Interlude begins with a unique computer interview of the participants to determine their mood. Then it searches its memory to select the best Interlude for the occasion. You may be referred to the instruction manual which describes most of the 106 Interludes, or your instructions may appear on your screen if you've chanced to hit upon one of the many surprise Interludes buried within the program. (When you discover secret Interlude #99, your love life may never be the same again!)
Interlude ... it's fun ... it's fanciful ... it's fantastic. It's the computer game for adults. Are you ready for it?

TITLE: INVENTORY
PUBLISHED BY: RAINBOW

Allows for user field definitions 140 items 16K
PRICE: 35.00

TITLE: KNOW YOURSELF
PUBLISHED BY: CREATIVE COMPUTING

This package contains four programs. LIFE EXPECTANCY - will a different life style increase your life expectancy? PSYCHOTHERAPY - analyze symptoms in your feelings and behavior to determine your mental health. COMPUTER LITERACY - what's yours? ALCOHOL - effect of alcohol on your behavior.
16K.
PRICE: $7.95

TITLE: LIFE EXPECTANCY
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Do you ever wonder how long you will live? Take the Life Expectancy quiz and find out! Will a different life style increase your life expectancy? Will following all the advice in the National Enquirer really help?

TITLE: MAGAZINE FILE
PUBLISHED BY: SYNERGISTIC SOFTWARE

The need to keep track of the many articles, programs, new products, hardware advertisements, software advertisements, etc. in magazines is great.

Here is the answer. A magazine article filing program done in 6 modules to keep memory requirement low. A 16K system with the Applesoft II firmware card can run these programs.

MAG FILE CREATE - The first module creates a master file and a subfile by subject name and code order. There are enough characters allowed on the subject line for remarks or a sub-subject.

MAG FILE SEARCH - This module searches the master or the subfile by users choice of code number or subject. Subjects are searched for and displayed on the basis of their left four characters. For example the subjects entitled: SORTING, SORTING PROGRAM, SORTS BY LAST NAME or SORTS (NUMBERS) will all be displayed with the data necesary to find the article.

MAG FILE DUMP - This module dumps all data to the screen with the corresponding record number 18 lines at a time. This allows user to see if data is present and correct.

MAG FILE CORRECT - In addition to the correction routine in the CREATE module another correction module is provided for later updating of a record or deletion of a record or placing different data in a record.

MAG FILE TRANSFER - Allows the user with one drive to create a backup copy of the programs plus the data files. This module loads the data into memory and dumps them to another diskette.

MAG FILES is done in Applesoft II using easy to use GET statements so that RETURN is not used on non-essential input.

Plus all the excellent screen formatting, error trapping and user orientation you have come to expect Southeastern Software.
PRICE: Diskette 18.00

TITLE: MAILING LIST PROGRAM
PUBLISHED BY: PROGRESSIVE
Maintians complete record of name, address, phone number; mailing labels. Accomodates parallel card or built-in printer driver. Easy data entry and data correction. Built-in error trapping routines. Multiple files allowed on a diskette. Modified DOS for non AS-II ROM users.
PRICE: DISK, 9.95

TITLE: MEMO CALENDAR
PUBLISHED BY: MICRO COMPUTER SYSTEM
MEMORY: 32K
The Memo Calendar is designed to perform the functions of a diary and a memo pad/calendar. The user enters an 80 byte "memo" and assigns a date to it. You can call up any date's memos on the screen at any time. Memos for each date are numbered for convenience, and any memo may be deleted without disturbing the other memos for that date. Memos may be displayed and/or printed by date or by month. If you have a Mountain Hardware Real Time Clock, the memos for the current day can be automatically displayed the first time the program is run.

CAPACITY:

- Up to 500 different dates
- Approximately 1,000 memos of 80 characters each.

FEATURES

- Automatic re-use of space when a memo is deleted, making file compaction unnecessary.
- With the Mountain Hardware Clock, automatic display of current day's memos.
- High-Speed - any memo on the diskette retrieved within 3 seconds.

The Memo Calendar program is written in Applesoft for maximum flexibility. All printer initialization is done from one line in the program, where any BLOADS and/or calls may be made.

PRICE: $29.95

TITLE: MICRO MEMO
PUBLISHED BY: BARNEY STONE

A powerful, easy-to-use appointment calendar.
Includes one-time, weekly, monthly, semi-annual, and annual memos.
Will remind you one week, two weeks or a month in advance to prepare for meetings, make reservations, buy birthday presents, etc.
Display or print any day's or week's reminders.
A "perpetual" calendar: holds one full year, beginning with any month.
Automatically posts birthdays, etc., into new months.
Knows most major holidays.
Supports Mt. Hardware Apple Clock (not required).
PRICE: 39.95

TITLE: MORTGAGE
PUBLISHED BY: UNITED SOFTWARE OF AMERICA
Calculates and optimizes mortgage payments. 8-32K.
PRICE: $15.95

TITLE: MORTGAGE WITH PREPAYMENT OPTION/FINANCIER
PUBLISHED BY: INSTANT SOFTWARE
MEMORY: 16K
These two program will more than pay for themselves if you mortgage a home or make investments:
Mortgage with Prepayment Option-Calculate mortgage payment schedules and save money with prepayments.
Financier-Calculate which investment will pay you the most, figure annual depreciation, and compute the cost of borrowing, easily and quickly.
PRICE: TAPE, 7.95

TITLE: NAME & ADDRESS
PUBLISHED BY: WALLACE ELECTRONICS
The name and address program allows the user to keep track of names, addresses, phone numbers, important dates, and codes. For both businesses and individuals. This program is an excellent data base with searching facilities that are much faster than Apple's checkbook program.

TITLE: NUTRI-PACK
PUBLISHED BY: MICRO-COMP INCORPORATED

Nutri-Pack for the Apple II is a series of programs and a data base designed to evaluate the nurtitional quality of a daily diet. It contains information on the caloric, fat and protein content and the levels of eight vitamins and minerals in the 600 listed foods.

PRICE: $39.95

TITLE: PERPETUAL CALENDAR
PUBLISHED BY: PROGRAMMA

PERPETUAL CALENDAR is a useful program that displays any year's calendar on your television screen. You can quickly page both forward and backward through the months. The program shows holidays and important dates. The program also displays the flower and birthstone of each month.

PRICE: TAPE, 1595

TITLE: PERPETUAL CALENDAR
PUBLISHED BY: PROGRESSIVE

This program will perform two functions: days between dates (any two dates) or a perpetual calendar. If the calendar is chosen, it will automatically give the usccessive months by merely hitting the return key. May be used with or without a printer.

PRICE: TAPE, 9.95

TITLE: PERSONAL ACCOUNTING SYSTEM
PUBLISHED BY: CREATIVE SOFTWARE

Receipts, checks---they tell you what you've spent and what is deductible.

PRICE: TAPE or DISK, 29.95

TITLE: PERSONAL ACCOUNTING SYSTEM I
PUBLISHED BY: CREATIVE SOFTWARE

Turns your checking account into a recording and budget management system.

PRICE: DISK, 99.95

TITLE: PERSONAL ACCOUNTING SYSTEM I
PUBLISHED BY: CHARLES MANN
MEMORY: 32K of RAM
HARDWARE: SINGLE DISK SYSTEM
MICROPRINTER (opt.)

Keeps track of tax deductible and other expenditures to make budget planning and tax preparation easy. Businessman may further justify his business computer investment with this complete personal checking account based accounting system.

PRICE: DISK, 99.95

TITLE: PERSONAL EXPENSE RECORD
PUBLISHED BY: WISE OWL WORKSHOP

This program keeps a record of your personal expenses in eleven categories of your own choosing. It allows you to compare this year's expenses to last year's expenditures, also, you have the option of graphing a plot of expenses in color graphics. The program comes complete with instructions for custom modifications. A sample expense record form is provided.
PRICE: 9.95

TITLE: PERSONAL FINANCE MANAGER
PUBLISHED BY: APPLE COMPUTER INC.

Wonder where the money went? Personal Finance Manager is an easy-to-use, family budget management program that puts important financial information at your fingertips. It helps you keep better records of expenditures, analyze your spending patterns, validate checkbook statements, and maintain tax records. And you don't need any special expertise to use it, either.

With Personal Finance Manager you can organize your family's finances so they make sense, while at the same time sparing yourself the clutter and confusion of paperwork. On a single diskette, you can store a full year's worth of family financial records (200 entries a month for 12 months)—including detailed information on all check transactions, deposits, cash and credit card expenditures. You can even classify expenditures as tax deductible, consolidate the information for easier itemization when filing taxes, and "roll over" automatically to the next year.

Personal Finance Manager lets you define or modify up to 24 budget categories ... so you can compare spending habits (by cash, check, or credit cards(with budget limits you've set; lets you define or modify as many as 12 credit card expenditure accounts ... so you know instantaneously just how much money you owe; provides monthly and year-to-date summaries of expenditures ... so you can tell at a moment's glance how realistic your budget is; plots budget category activity, providing quick graphic comparisons of dollar amounts; lets you print out information at the touch of a key ... so you can take your financial records to the bank, the IRS, or wherever they're needed.

Keeping a budget that works is not just a matter of motivation —it's based on your need to access and maintain financial information easily. Personal Finance Manager lets you do exactly that.

Using the program's Enter Data option, you can add or modify financial transactions—such as cash and credit card expenditures—quickly and easily. The Data Search/Sort option provides simple listings of monthly budget entries you specify, such as all tax deductible expenditures for any particular quarter. This is extremely useful when you file taxes, for example, because it allows you to quickly isolate the information you need.

Another helpful option, Reconcile Checkbook, lets you account for all checking account transactions that appear on your bank's monthly statement. The program will indicate the amount of any discrepancy it detects, helping you determine the source of the error.

Budget Category Summary lets you analyze the status of any budget area you've defined. Three different summaries are available, two of which can be plotted as low-resolution graphs. Credit Account Summary works in a similar fashion, providing summaries and graphic presentation of defined credit accounts so you can readily analyze your charging habits.

In addition, a Status Report option shows you the amount of monthly disk space you've used, and lists the existing number of budget categories and defined credit accounts. The Initialization option lets you clear your Personal Finance

Manager diskette of old financial records, and Quit allows you to exit the program without erasing any of your files.
Personal Finance Manager is written in Applesoft BASIC. To use it, you'll need: an Apple II Plus with 48K bytes RAM; or an Apple II with 48K bytes RAM and an Applesoft Firmware Card; or an Apple II with the Apple Language System. Plus: Auto-Start ROM; an Apple Disk II with controller (16-sector PROMs); a video monitor or television.
With the Personal Finance Manager package, you'll receive: 1) Personal Finance Manager program diskette; 2) instructions.
PRICE: $75.00

TITLE: PERSONAL FINANCE PACKAGE
PUBLISHED BY: MAD HATTER SOFTWARE
This program contains three programs to aid you in the handling of your personal finances. The first is a Checking Account Program to help you keep track of checks, deposits, interest, charges, transfers, etc., along with computing your balance. It has a lot of nice features, including a fast method of data retrieval. The second program helps you keep track of your Budget and the final program Computes Interest on loans, mortgages and charge accounts.
16K.
PRICE: $9.95

TITLE: PERSONAL SECRETARY PACKAGE
PUBLISHED BY: CHARLES MANN
This package is designed for all desk bound workers and was developed around a major bank concept to improve efficiency and task freedom. The user quickly adds his or her special data to keep track of phone numbers, filed records and appointments. A simple question to the computer recalls the infomration of things to do and records which have been completed. At the end of the day a record of work done is easily compiled.
PRICE: TAPE, 59.95
DISK, 64.95

TITLE: PERSONNEL RECORD PROGRAM
PUBLISHED BY: CM&A
MEMORY: 16K
The Personnel Reocrd Program allows computerization of necessary personnel records in compliance with most state and federal laws. The program enters, updates, displays, searches and prints records as needed by the personnel manager. Data includes position records, education, race, sex, and age in compliance with equal emloyment opportunity programs. A special feature allows the status change notices to use in officeal company position changes.
PRICE: TAPE, 79.95
DISK, 84.95

TITLE: PERSONALITY PROFILE
PUBLISHED BY: PROGRAMMA INTERNATIONAL
This program uses the latest formulas to give you a close, in depth look at your personality traits. In addition, your persoanlity profile will be graphed in Lo-Res graphics. This program is designed for amusement purposes only. Your analysis

can be output to a printer.
APPLESOFT. 48K.
PRICE: TAPE $19.95

TITLE: PHONE DIRECTORY
PUBLISHED BY: VIDEO WORLD

This program stores, on disk, a large phone list of your customers or employees or anyone you want. You can recall any one name by person's name or company name. The inputs to the file are Name, Company, Phone No., and Extension. We can add more entries if you wish to any file. The fields lengths are Name: (30), Company: (30), Phone No.: (12), as 309 686-9352, Extension: (4). The program will print out a phone list of all entries in the file with their company and phone no.
PRICE: Disk 70.00

TITLE: PROFESSIONAL DISK
PUBLISHED BY: ANDENT

Alcoholic Test - test yourself and family/friends for traits of this serious disease. Are you a hidden alcoholic.
Heart Attacks - medically test your chances for heart problems. Inputs sex, habits, diet, family history, etc.
Interest Print - compute and bill interest on your accounts due. A great money maker.
Sublim - flash variable messages on the monitor screen so rapid that the viewer is influenced on a sub-conscious level. Subliminal suggestion is very effective in promotting slaes, learning, ego strengthening and behavior modification.
PRICE: ALL, 20.00

TITLE: PROGRAMMED EXERCISES
PUBLISHED BY: CHARLES MANN

Most of us do not get enough exercise and run the risk of poor health later in life simply because we let our hearts and lungs lose effectiveness. This executive fitness program uses the low resolution graphics capability to present an animated program designed for total fitness. The complete program takes less than 30 minutes and the staged development allows progress through the stages appropriate to the individual age. The effort is complete from warm up to cool off. The user determines his level of exercise then watches the exercise on the screen. The graphics are accompanied with directions. After actual completion of the exercise the computer suplies a planned rest period. Exercise samples show suggested exercise speed. The total program is appropriate for either home or office use.
PRICE: DISK, 24.95

TITLE: PSYCHOTHERAPY
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

The APPLE analyst asks you 20 questions to help you decide if you might benefit from a psychotherapist. Psychoterapy asks you about your feelings, actions, and probias and compares them against population norms. Here's where you can talk freely about those special powers people are using against you. With sound. For all computer freaks.

TITLE: REAL ESTATE GAME
PUBLISHED BY: PS
MEMORY: 16K, INTEGER

This is a game of wheeling and dealing in the world of real estate based on the popular board game played World-wide. The playing board is simulated by using the wide color spectrum of low resolution graphics. Two to six players can play this game.
PRICE: Tape, $9.95

TITLE: SOUNDING BOARD
PUBLISHED BY: PSE
MEMORY: Written in Applesoft - Requires 16K

With Sounding Board, you can turn your Apple into a "teleological analyzer". Sounding Board is a program designed to assist you in the process of achieving a goal. Usually the hardest part of the process is putting the facts into an objective context. Sounding Board requires you to explicitly list the relevant aspects of the situation surrounding your goal. It then leads you through a series of questions that end in one of three mutually exclusive results:

1. A goal/action plan.
2. You decide that your goal is not possible at the present time.
3. You decide your goal was a bad idea in the first place...and forget the whole thing.

PRICE: 50.00

TITLE: THE SOURCE
PUBLISHED BY: SOURCE

ADVANCED APPLICATIONS AND PROGRAMS.
Reference manual and programming guides, calculator mode, file structures, editing and sorting, programming in extended BASIC, FORTRAN, COBOL, RPG, Assembly, program debugger, system commands, microprocessor cross-compilers.
BUSINESS AND FINANCE.
Accounts payable, accounts receivable, general ledger, payroll, special applications. American Stock Exchange bond prices, Federal land bank bond prices, New York Stock Exchange and bond prices, Treasury bills, World Bank bond prices, Commodity prices and futures, earnings reports, financial commentary, financial news and heading, foreign exchange rates, stock market averages, closing statistics, news, quotations, summaries, Treasury bill auction reports.
DAILY NEWS AND FEATURES.
UPI General wire service, Washington hotline, international and domestic news, business and financial news, sports news, UPI syndicated features, daily new summary.
EDUCATION.
Teaching a child to count, days of the week for children, alphabet for children, adding longer numbers and decimals for children, changing numbers from base

10 to base 2-9, finding the greatest common divisor, spelling facts about months, typewriter keyboard drills, arithmetic, correct spelling of "ie" and "ei" words, plurals of words. French language drill, German vocabulary drill, Italian vocabulary drill, algebra, geometry, social science, student consumer's guide, Federal financial aid programs.

NATIONAL REAL ESTATE LOCATOR SERVICES

NEW YORK TIMES CONSUMER DATA BASE

MAIL CALL.

The Electornic Mail System, sending and receiving messages to other SOURCE users, toll-free voice access anywhere in the U.S., Datapost hard-copy letter delivery anywhere in the U.S.

HOME ENTERTAINMENT.

Computer game library, wine tasting information, wine market report, gourmet meal recipes, special diet recipes, syndicated features on home entertainment, chess club, backgammon, bridge.

PERSONAL FINANCE.

After tax yield-to maturity of a bond, analysis of payment or withdrawal, amortization of house payments, annual interest rates on installment loans, balancing of checkbooks, income tax assistance, loan amortization schedule, monthly payments on simple annuity debts, mortgage analysis, missing variable, price of accrued interest for a bond, financial news and commentary, buying and selling a home, financing a home, home buying and selling service, FHA, VA, or conventional mortgage qualifications.

TRAVEL CLUB.

Electronic reservation and confirmation service, airport pick-up of tickets, automatic billing to credit card, airline schedule review, motel/hotel and rental car reservations.

SCIENCE AND ENGINEERING.

Electrical engineering, general mathematics, mechanical engineering, computer simulations, statistics.

STARCAST.

Biorhythms, past, present, or future, daily horoscope.

MONEY-SAVER BUYING SERVICE.

20%-40% savings on major appliances, televisions, stereo and hi-fi equipment, VTR's, cameras, furniture and carpeting, watches, crystal, calculators, tires, and power tools, instant ordering, home delivery, automatically charged to your credit card, nation-wide search for lowest price on selected items.

MORE SERVICES ARE BEING ADDED EVERY WEEK.

The SOURCE information utility is compatible with almost any terminal or personal computer.

WELCOME TO THE SOURCE INFORMATION UTILITY.

The new terminal-accessed information service that fits your home and office with communication, knowledge, and fun, at the touch of a button ... for as little as $2.75 per hour.

TITLE: SUPER CHECKBOOK
PUBLISHED BY: POWER SOFT

A totally new checkbook program with a unique option ... Bar Graphs. These bar graphs, outputed to a printer or video screen, provide trend analysis data on code expense, income, expenses, or gain/loss on a month by month basis. The program contains a total of fourteen options: 1) Check/Deposit Entry & Modification, 2) Reconciliation of Checks or Deposits, 3) Sort by Check Number, 4) Sort by Code for Year, 5) Sort by Code for Month, 6) Output Year to Date, 7) Output Month Activity, 8-11) Printer/Video Plot Trend Analysis-Bar Graphs, 12) Account Status, 13) Reconciled Check Status, and 14) Quit. An excellent program for maintaining your checkbook, or that of a small business.
PRICE: 19.95

TITLE: SUPER X-10 MOD
PUBLISHER: CONNECTICUT MICROCOMPUTER, INC.

Remote Controller, Clock/Calendar, Digital Input/Output Triggered Sequences.
CmC's uMAC SYSTEM now includes an interface to the BSR X-10 remote controlled modules. These low cost modules, when used with the SUPER X-10 MOD, allow computer control over lamps, motors and appliances. Lamps can be turned on or off, dimmed or brightened. Alarms, kitchen applinces, hi-fis, TVs, motors, fans, pumps, heaters, lab equipment and more can be put under your computer's control.
A clock and calendar that can be read by your computer is incorporated into the SUPER X-10 MOD.
Eight digital inputs and eight digital outputs are also included. This MODule can be hooked up to switches at windows, doors, etc. for sensing by your computer. The SUPER X-10 MOD can be programmed so that the opening or closing of a window or door initiates a sequence of operations such as turning on a light, radio and alarm. This sequence can occur even is your computer is turned off.
Direct plug-in capability and software for most computers.
Remote controller controls up to 256 different remote devices by sending signals over the house wiring to remote modules. Uses BSR remote modules available all over the USA. Does not require BSR control module. Does not use sonic link.
Clock/calendar. Time of day - hours, minutes, seconds. Date - month, day -automatically corrects for 28, 29, 30 and 31 day months. Day of the week.
Digital inputs/outputs. 8 inputs - TTL levels or switch closures. Can be used as triggers for stored sequences. 8 outputs - TTL levels.
Computer interfaces. S-100: Requires one 8-bit input port and one 8-bit output port. Requires cable assembly. PET, APPLE, TRS-80, KIM, SYM, AIM65: Plug-in sets available - no cable assembly required. Other: same as S-100.
Self-contained module in metal case with its own power supply. Physical size approximately 5x6x2.
PRICE: $199.00 (S-100), $249.00 (other)

TITLE: TAROT CARDS
PUBLISHED BY: PI
MEMORY: 16K BASIC
Tarot Cards is a fortune telling computer program that theoretically can predict the future. The program uses the ancient 78 card deck of Tarot Cards. You ask the computer a question and it begins to shuffle the deck. When you tell it to stop, it will give you an explanation of the events leading up to the question, the present state of the question and an answer for the future.
PRICE: 9.95

TITLE: TV TYPER
PUBLISHED BY: BILL HINDORFF
Turns your Apple into a TVT. (Applesoft ROM, req. 48K)
PRICE: $19.95

TITLE: THINGS TO DO
PUBLISHED BY: CHARLES MANN
MEMORY: 4K
The things to do program lists the day's work and erases completed assignments as done. The program can be easily interrupted to allow direct command computer assignments. A return to the program again displays the days tasks to be done. After a hard day, proof of accomplishments are available.
PRICE: 24.00

TITLE: TRANSACTIONAL ANALYSIS
PUBLISHED BY: PERSONAL SOFTWARE

An introduction to T. A. - system for understanding human behavoir. Chapters include: You As A Person, Stroking, Transactions, Are You Listening?, The Balancing Game. This interactive learning cassette will help you gain a better understanding of why you get along with some people and not with others, and may give you a better understanding of yourself.
TRUE/FALSE QUIZ
PRICE: 8.00

PERSONAL/HOME USE SECTION 2

Compatibility Test 2PH-1
Creativity Life Dynamic Package 2PH-1
Hyperactive Child Checklist/Autistic Child ... 2PH-1Observation Test ... 2PH-1
Personal Financial Planning 2PH-1
Pickyness Test/Openness Test 2PH-1
Sex-o-Scope 2PH-2
Unintelligence Test 2PH-2

TITLE: COMPATIBILITY TEST (disk)
PUBLISHED BY: HUNTINGTON COMPUTING

Find out if you are compatible with the one you love.
PRICE: $10.00

TITLE: CREATIVITY LIFE DYNAMIC PACKAGE
PUBLISHED BY: AVANT-GARDE PRODUCTIONS

Encourages creativity. Allows user to write music & poems & draw. Book, 2 drawing cards. Disc, 48K.
PRICE: $19.95

TITLE: HYPERACTIVE CHILD CHECKLIST/AUTISTIC CHILD
PUBLISHED BY: HUNTINGTON COMPUTING

Two separate programs to help you become aware of children's problems.
PRICE: $15.00

TITLE: OBSERVATION TEST (disk)
PUBLISHED BY: HUNTINGTON COMPUTING

How observant are you? Thirty questions.
PRICE: $12.00

TITLE: PERSONAL FINANCIAL PLANNING
PUBLISHED BY: EDUCATIONAL PROGRAMMING SYSTEMS

Personal Financial Planning is a survival course for the 80s because it helps you plan for a more secure financial future in spite of today's shrinking dollar. You'll learn to earn more money, keep more of what you earn, and put your money to work to earn even more money.
In the 250 page text, you'll be shown proven strategies and capital building techniques. You'll learn to —
create a personal balance sheet;
develop income-producing spending plans;
analyze purchases in terms of alternate consumption possibilities;
evaluate investments;
create a tax-minimizing estate plan;
build a sound personal portfolio;
select compensation devices that put more after-tax dollars in your pocket.
IMPLEMENT YOUR PERSONAL FINANCIAL STRATEGY WITH YOUR MICROCOMPUTER
The course's proven financial planning methods are brought to life by your desktop computer through the micro-applications provided with the course. For example, micro-applications for *Personal Financial Planning* turn your computer into a powerful interactive planning system which allows you to —
prepare a personal balance sheet for use in analyzing your net worth;
compile annual income and expense summaries for past years (e.g., from checkbook entries, charge slips, and cash receipts), and for preparing budgets for upcoming years;
create automated systems for maintaining records of your personal insurance and
assist you in your estate and retirement planning, including analysis of insurance, investment, and retirement programs.

TITLE: PICKYNESS TEST/OPENNESS TEST (disk)
PUBLISHED BY: HUNTINGTON COMPUTING

Two separate tests to determine how picky you are and how open you are.
PRICE: $12.00

TITLE: SEX-O-SCOPE
PUBLISHED BY: AGS SOFTWARE

It's all there in the stars, but there are some things most astrologers would hesitate to tell you. About your sexual nature, and that of those you love — even though this is as must a part of you as anything else, and even though it is plainly stated in the language of your planets.

Now, however, you can learn these exciting secrets in the privacy of your own computer room!

This program erects and interprets your own individualized natal horoscope just as an astrologer would do — but it also tells you much, much more than most astrologers would dare!

With Sex-o-Scope, you can gain self-understanding and self-acceptance, clarify your own needs, and find out how to honor them. You can determine what kind of partner is best for you, and learn what pleases her or him. You can use Sex-o-Scope to break the ice with those who are shy. Or you can just satisfy your curiosity about what makes someone tick!

Your private sex consultant is John Townley, master astrologer, author of PLANETS IN LOVE, and former editor of SEXOLOGY magazine. For years, he has studied ALL forms of sexual behavior, and along with his witty writing style in Sex-o-Scope, he brings a tolerant, understanding viewpoint.

PRICE: $30

TITLE: UNINTELLIGENCE TEST (disk)
PUBLISHED BY: HUNTINGTON COMPUTING

Find out how unintelligent you are.

PRICE: $10.00

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TITLE: ADA 400
PUBLISHED BY: CONNECTICUT MICROCOMPUTER, INC.

The ADA 400 dual circuit adapter converts an RS-232 signal to a 20 ma current loop signal, and converts a 20 ma current loop signal to a RS-232 terminal, or vice versa, without modification of the port. It is available with either solder pads or barrier strips with screw terminals.

At Connecticut microComputer, we are dedicated to the development of accessories and interfaces to enhance the utility of all popular microcomputers. Not only do we allow the boarder application of standard printers and other peripherals, but our data acquisition modules allow the input and control of real world variables such as weight, temperature, pressure, humidity, speed, and fluid level to the computer.

TITLE: A/D + D/A
PUBLISHED BY: MOUNTAIN HARDWARE

Commercial, scientific, and industrial data acquisition and control functions are now practical with Mountain Hardware's A/D + *D/A card. Superfast conversion time permits high frequency and other applications not possible with slower cards.*

A/D + D/A features: Single PC card, 16 channels digital to analog output, 9 us conversion time, 8 bit resolution, I/O cable assembly available, Operating manual contains sample applications with schematics, parts list, and guides for easy start-ups, Self-test diagnostic software.

TITLE: THE ADWAR APPLE PROC. MOD.
PUBLISHED BY: ADWAR VIDEO CORP.

At last! You can videotape apple color graphics. The Adwar Apple Proc. Mod. modifies nonstandard Apple color sync signals to fall within NTSC videotape recorder tolerances. Record, edit, duplicate without loss of color.

Add colorful graphics and illustrated titles to your videotapes. Easy to install in slot #7 of Apple computer.

PRICE: $250.00

TITLE: ANALOG INPUT MODULE
PUBLISHED BY: CONNECTICUT MICROCOMPUTER, INC.

The AIM 16 is an 8-bit, 16-channel, analog-to-digital converter adaptable to most microcomputers. POW1 power supplies provide the required power for either 15 or 230 VAC systems.

At Connecticut microComputer, we are dedicated to the development of accessories and interfaces to enhance the utility of all popular microcomputers. Not only do we allow the boarder application of standard printers and other peripherals, but our data acquisition modules allow the input and control of real world variables such as weight, temperature, pressure, humidity, speed, and fluid level to the computer.

TITLE: THE APPLE CLOCK
PUBLISHED BY: MOUNTAIN HARDWARE

NEW UTILITY FOR YOUR COMPUTER.

Until now, there hasn't been a Real-Time Clock for the Apple II*. The Apple Clock from Mountain Hardware keeps time and date in 1mS increments for over one year. On-board battery backup keeps the clock running in the event of power outage. Software controlled interrupts are generated by the clock. That means you can call up schedules, time events, date printouts . . .all in real time on a programmed schedule.

EASY TO USE.
The Apple Clock is easily accessed from the BASIC using routines carries in on-board ROM. With it, you can read time and program time-dependent functions from virtually any interval. From milliseconds to days, months or a year.
PLUG IN AND GO.
Plug the Apple Clock into a peripheral slot on your Apple II and you're ready to go.
FEATURES.
Time and date in 1mS increments for periods as long as one year.
Software for calendar and clock routines, as well as an event timer are contained on on-board ROM.
Program interrupts.
Crystal controlled accuracy of #.001%.
On-board battery backup keeps your clock in operation even during power outage.
REAL TIME AT THE RIGHT PRICE.
Assembled and tested, it's the clock your Apple has been waiting for. And, it's available now through your Apple dealer. Drop in for a demonstration.
A COMPLETE LINE.
Mountain Hardware also offers a complete line of peripheral products for many fine computers.
PRICE: 280.00

TITLE: APPLE II EPROM
PUBLISHED BY: MICROPRODUCTS

Add capability to your system monitor or BASIC for business or other applications. Add commands to the operating system. New operating systems can be put into EPROM memory with our EPROM programmer and plugged directly into your APPLE II board with our EPROM socket adaptor. The MICROPRODUCTS EPROM PROGRAMMER will program INTEL 2716s, 2758s and other 5-volt replacements for 2716s.
Add to or replace existing APPLE II ROM software with operating systems of your own design. Other software systems similar to PASCAL, FORTH, LISP, APL, FORTRAN, COBOL, ALGOL, other BASIC's, etc. may be incorprated into your APPLE II ROM space.
The EPROM Programmer looks just like memory to the computer and can be configured to program memory locations from 8000 to FFFF for a total of 32K bytes. This means that the EPROMs can be used in computer applications other than the APPLE II.
PRICE: $99.95 - Eprom Programmer for 5 volt, 2K byte EPROMs.
$14.95 - Eprom Socket Adapter. Adapts 5 volt Eproms to Apple II ROM sockets.

TITLE: APPLEJUICE
PUBLISHED BY: HIGH TECH

Application of computers (especially in business environments) require protection against program interruption and data loss due to power "flickers", brownouts and prolonged outages. High Technology, Inc. is now offering the "APPLEJUICE" reserve power supply to provide protection against power losses for the Apple microcomputer line, including European version of the computer.

So that the system may be brought to a controlled stop, the APPLEJUICE provides a visual, audible and an electronic signal output to alert the user or computer when a power failure is occurring.
Power supply backup time is approximately fifteen (15) minutes.

PRODUCT DESCRIPTION:
The Applejuice reserve power supply is designed to provide backup power for the Apple II* computer during power "flickers", prolonged outages and brownout. It supplies three means of detecting a power failure and enough backup time to transfer the contents of memory to cassette or disk. This feature is achieved either by the operator or by utilizing the Applejuice's interrupt option. This is a signal from the Applejuice that can be used to generate an interrupt, a halt, or a reset instruction in the computer, or to operate any external device requiring less than 60 ma. Utilization of this feature may require generation of necessary software by the user. Refer to PP. 127-130 of your APPLE II Reference Manual* for an explanation of these features and the necessary pinout for hard-wire connection of the Applejuice to the Apple in order to utilize the interrupt feature of the Applejuice.

PRICE: $249.00

TITLE: APPLE LANGUAGE SYSTEM
PUBLISHED BY: APPLE COMPUTERS INC.

This system allows Apple users to take immediate advantage of the powerful Pascal language, as well as the Integer and Applesoft BASIC interpreters. It does this by means of the Language Card, which provides 16K bytes of RAM memory that electrically replace the ROM firmware built into each Apple. Upon start-up, this RAM memory is automatically loaded from disk with the user's choice of languages, then protected from change. This technique gives both Apple II and II Plus owners access to all available languages, as well as the hardware needed to run future language processors as they appear.
Equally important, this product comes with a set of conversion PROMs that allow for a 20% increase in disk capacity, by implementing a compatible 16-sector (143K byte) disk format. (This increase is available to all Pascal users, and to BASIC users who work with the DOS 3.3 Operating System.)
Operating Manual.

TITLE: THE MEAN LITTLE KIT
PUBLISHED BY: JENSEN TOOLS INC.

New compact 24-piece kit of electronic tools for engineers, scientists, technicians, students, executives. Includes 7 sizes screwdrivers, adjustable wrench, 2 pair pliers, wire stripper, knife, alignment tool, stainless rule, hex-key set, scissors, 2 flexible files, burnisher, miniature soldering iron, solder aid, coil and solder and desoldering braid. Highest quality padded zipper case, 6 x 9 x 1¾" inside. Satisfaction guaranteed. Send check, company purchase order or charge Visa or Mastercharge. We pay the shipping charges.

PRICE: $82.00

TITLE: THE BARWAND

This is the Hewlett-Packard HEDS-3000 Digital Bar Code Wand interfaced to the Apple computer line by Advanced Business Technology, Inc. and modified for improved electrical noise immunity. The BarWand is a hand-held bar code scanner with integral push-to-read switch. It is designed to read all common bar code formats that have the narrowest bars printed with a nominal width of 0.3mm. The BarWand with its application software enables the APPLE to directly read data printed in various bar code formats such as inventory labels, product codes, and Paperbyte** program code.

TYPICAL USES

MANUFACTURING: Inventory, Assembly and Labor control.

RETAILING: Point of Sale data entry.

PERSONAL: Quick entry of printed Computer Software.

LIBRARIES: Book and card control.

EDUCATION: Test data entry.

FEATURES: 0.3 mm Resolution, Integral push-to-read switch, Replaceable low friction tip, 7 foot coiled stretch cable, Stylized lightweight case.

SPECIFICATIONS: WAND OPERATION

The BarWand will respond to a bar code with nominal width of 0.3mm when it is scanned with a tip velocity between 7.6 and 76 cm/s. The wand must be held with a tilt angle between 0 and 30 degrees and the tip in contact with the tag. The surface of the switch button must be parallel to the height dimension of the bar code. A digitizing circuit in the wand insures a TTL compatible logic high when positioned over a non-reflecting black bar and a logic low over a reflecting white space. A push-to-read switch energizes the 700nm LED emitter and electronic circuitry.

ELECTRICAL: Supply Voltage - 3.6 to 5.75 vdc, Supply Current - 50ma 5v & black, Output Power - 200 mw, Switch Bounce - 5ms max.

MECHANICAL: Scanning tip - Replaceable, Weight - 1.5 oz. (less cable), Cable Length - 7 feet, Body Length - 5.2 in., Body Diameter - .75 in. nominal.

INSTALLATION: Apple II, Apple II Plus: A 6 pin connector terminates the BarWand cable and is simply plugged into the Apple game interface J14.

Apple III: A 9 pin connector terminates the BarWand cable and is simply plugged into the Apple's port B.

SOFTWARE: Assembly code subroutines are provided on 5" disc media to read most commonly encountered bar codes including Paperbyte**, LabelCode, and typical U.P.C. codes. These subroutines are arranged in a series of application demonstrations written in Applesoft. Source listings are included in the instruction booklet.

TITLE: BRIGHT PEN
PUBLISHED BY: SOFTAPE

The Bright Pen for your Apple II. This product is well suited to both entertainment and serious research uses; and opens unique new application by simplifying the input of maps - histograms. And best of all the bright pen is intelligent, you can do all these things quickly and easily, in Basic. Includes control software. Light Pen editing of Integer Basic programs. Graphic plotting with full color control Menu selection demo. Demo tape. Fully assembled and tested ready to plug in and use.

PRICE $34.95

TITLE: B&W VIDEO CAMERA (SANYO MODEL VC161OX)
PUBLISHED BY: COMPUTER STATIONS, INC.

Camera used with our Dithertizer II board for video input into the Apple. Camera is designed to provide total flexibility in CCTV and VTR applications. This dependable, all solid state video camera features precision line locked internal sync. or external EIA drive, wide range ALC, high resolution and 16mm, F1.6 lens. 117 VAC, 60 Hz.
PRICE: $410.00

TITLE: COMPUTALKER CONSULTANTS CT-1
PUBLISHED BY: COMPUTALKER CONSULTANTS

Apple II owners, ADD BARK TO YOUR BITE!
Now you can hear your APPLE II talk with all the clear, highly intelligible, natural sounding speech the COMPUTALKER CONSULTANTS CT-1 speech synthesizer is famous for.
Far superior to any other synthesizer on the market today, the new Model CT-1A APPLE II synthesizer comes complete with its own chassis, power supply, interconnect cable, controller card, easy-to-use manual and software package 1 (disk or cassette). A minimum of 16K RAM is required (32K recommended).
PRICE: $495

TITLE: INTELLIGENT OPTICAL MARK SENSE CARD READER
PUBLISHED BY: MOUNTAIN COMPUTER, INC.

Universal standard RS-232 interface. Connects directly to computer's serial interface. No programs required using built-in personality firmware and built-in microprocessor. Can be located away from computer for remote job entry. Direct connection to printer or other output device. Personality ROMs supplied for programming in Applesoft BASIC, TRS-80 BASIC, or DES RSTS (specify which). Educational test storing program software available.
Features in addition to the above are as follows: a) The card can be easily used by 14 year programming students with no knowledge of binary, hexadecimal or other code systems. b) No control programs to write to load. Built-in intelligence automatically completes initialization procedure. c) Multi-choice question and "raw data" features ensure wide variety of Model 1000 applications within the campus administration system. d) APPLE sees the card reader as effectively in parallel with the keyboard, thus at anytime the operator can edit from the keyboard, insert new lines, etc.
Principle of Operation.
The card reader contains a bank of 13 infra-red emitters and sensors which read through the card, senor output variations occurring when pencil or felt tip markings pass over the read head. As the system does not use a reflective principle, the normal read errors due to vertical card movement are eliminated.
The clock marks determine when each column is read at which the the appropriate character or series of characters (INVERSE, PR= etc) are obtained from a look-up table and kept in a buffer until the card is completely read. The serial ASCII information is then sent to line (normally 2400 baud). A "carriage return" is automatically sent to line after the buffer is emptied, unless the top four chads in the right most column are marked. In this case the carriage return is not sent and subsequent cards will be read (ignoring any line numbers up to a maximum of 255 characters.

TITLE: CAVRI SYSTEMS
PUBLISHED BY: CARVI

The CAVRI Learning System offers the exciting integration of computer assisted instruction (CAI) and videotaped teaching. Capitalizing on the audio-visual impact of video tape and the individualized instruction possible with the computer, the System is valuable in a variety of fields such as industrial training, education, advertising, and competency testing, to name a few.

With the System the user presents a segment of videotaped materials. The CAVRI interface then automatically pauses the VTR while computer aided learning is carried out. Only after the learner has demonstrated a thorough understanding of what has been presented does the next cycle of VTR/CAI begin.

The CAVRI Learning System can be used with existing instructional videotapes or with tapes made specifically for use with the CAVRI System. Routines are included in the CAVRI package to simplify the programming, "insertion", and synchronization of CAI on tapes. VTR materials are presented sequentially; there is no random access.

The CAVRI interface unit and accompanying software and operating manual are solely available from CAVRI Systems. The system can be used with the Apple II or any computer with an RS 232 interfact and any VTR with two audio tracks and remote pause control.

TITLE: CLUSTER/ONE MODEL A
PUBLISHED BY: NESTAR SYSTEMS INCORPORATED

ABSTRACT: Local computer networks have been extensively discussed. Typical systems proposed or built involve —
connecting large (maxi- or mini-) computers;
large computer systems' price tags;
systems programmer support for interfacing.
Another strong recent trend is the increased availability of low cost personal computers. In these systems significant dedicated computer power is available to the user at a cost that is little more than that of a terminal connected to a larger system.
A commercially available local computer network of personal computers is described here. The system combines the advantages of personal computers (low cost per user, a computer on every desk, etc.) with those of local computer networks (access to shared resources, cost sharing of expensive peripherals, smooth system growth with constant compute power per user.)
Suph systems have significant cost advantages over alternative systems designs of equivalent power. In addition, many new capabilities derive from local computer networks such as shared data, computer-to-computer communication, and intelligent server resources (print spoolers, file systems, database backends, etc.) The network discussed here has been designed so that existing applications can take advantage of the network features with little or no modification.
INTRODUCTION
Two highly visible recent trends in computer systems are local computer networks (1,2) and personal computers. Local computer networks provide enhanced

system capability and effectiveness by allowing:
computer to computer communication; data sharing among computers; cost sharing of expensive electro-mechanical resources (such as printers and mass storage devices)
Personal computers are changing our view of computers by providing: very low cost computing; easy access to computing; constant computer power per user (independent of time of day, other users, etc.)
To date, however, local computer networks have typically been discussed in the context of large (and expensive) computer system environments; and personal computers have not been effectively joined into resource sharing networks.
Now, a new kind of computer system is feasible: a local computer network of personal computers. The goals of such a system should be to provide the advantages of local computer networks in a system that is cost compatible with personal computers. This can be accomplished by combining two strategies. First, the system should be configured using existing components such as popular personal computers and readily available mass storage (disk) devices. Secondly, the software configuration process must be simplified by allowing existing software modules - from operating systems to compiler to data base managers, etc. - to make effective use of the network with little or no modification.
A system which meets these goals is the Nestar Systems, Inc. Cluster/One Model A (3).
CONFIGURATION
The system allows the interconnection of a number (currently up to 64) of personal computers (e.g. Apple II computers[4]) in a local area network (total length up to 1000 feet). The computers on the network are called stations. There is no centralized control. Any number of stations (called servers) may provide services for other stations (called clients) on the network. Typical server functions are: file system; print spooler; time of day clock; data base management system; gateway to other networks; other specialized hardware or software functions.
Servers may also be clients of other servers as appropriate. For instance, the print spooler server may be a client of the file system server in the course of serving its own clients.
IMPLEMENTATION
The network is physically implemented by a cable between the network stations that is accessed by a network interface card in each station. Network topology is not restricted; straight line bus, star configuration, or tree structure are all allowed. In keeping with the cost goals, the network interface card does not contain a CPU or complex control circuitry. It consists instead of network bus drivers, RAM buffers, and ROM code which is executed by the CPU of the station itself in order to access the network. The network cards of all stations on the network are identical, with the possible exception of different ROM code to implement the higher level protocols.
Access to the network is implemented as a layered set of protocols. Protocol level 0 is the physical network access. This level is handled by hardware and performs bus allocation, bus contention resolution, address recognition, and byte transmission.
Level 1 is packet transmission. At this level multiple byte packets are reliably sent and received, including error detection and retransmission. This level is performed by ROM based firmware in the network interface card.
Level 2 is message transmission. Multiple packets may be grouped for interpretation as a single message. At this level for instance, uninterpreted data are passed between the file server and a client station requesting file reads and writes. Level 2 is generally performed by interface card ROM firmware.
Level 3 is the process communication level. At this level the contents of messages are interpreted by software running on the communicating stations. Two of the most common examples are:
passing service request metacommands on a virtual command channel from

client to server (e.g. "print file x for me", or "open file y for later reads and writes", or "lock file z for my exclusive use", or "previous transaction complete"; passing service requests on a virtual I/O channel from client to sever. This example is fundamental to achieving transparency of the network to existing station software (like operating systems). For instance, file access control blocks generated by an operating system on a station may be transmitted to a network file server rather than interpreted by local disk driver code. Thus by implementing a network file server which interprets control blocks of an existing operating system, the network provides distributed file access, as well as shared file capabilities, without requiring modification to local operating systems.

COST ADVANTAGES

A simple example illustrates the cost advantages of local networks of personal computers. Consider the most common alternative for local area "distributed" computing: a timeshared minicomputer. Assume that the minicomputer, including multiple-megabyte disk storage, costs $100,000 and that the terminals used cost $1000 each. The processing power of the minicomputer is ten times that of a personal computer. For n user stations then, the system for the timeshared system is

COST = $100,000 + $1000 * n

and the computer power available per user is

POWER = 10 * P / n (where P is the power of a personal computer)

For a comparable network of personal computers, the per-station cost is $2000 and a shared file server station with disk storage costs $20,000. System cost for n users is

COST = $20,000 $ $2000 * n

and per user computer power is

POWER = P.

APPLICATIONS

Use of the system can be described at many levels. For the designer of end-use systems the network provides a flexible configuration of distributed personal computers that can communicate with each other.

At the next level the system can be thought of as a society of independent personal computer stations some of which provide known services to other stations. For example, the system described here is provided with a file server station (discussed below).

At a higher level the system may be configured for a specific application, with multiple servers, and applications programs running on the client stations.

The file server (5,6,7) provided with the system runs on a single dedicated network station. It controls floppy disk and hard disk drives (potential total capacity 200 megabytes) attached to the station. The software accepts file transaction requests from client stations on the network and accesses the mass storage devices accordingly. The file system provided has a hierarchical structure of directories, password protection for individual files and directories, separate protection for user defined public, group and private access rights, interlocks for safe simultaneous file updates, and all the other characteristics of a state-of-the-art file system.

The file server is viewed by its clients as providing two virtual channels, one for file service metacommands, the other for passing I/O requests and data. The metacommands are used for high level manipulation of the file system, such as creating, deleting, mounting and unmounting files, and locking shared data during simultaneous updating. The virtual I/O channel is used just like a local disc facility. Because the file server has a dedicated processor, it can implement a superset of the I/O facilities normally provided by the local operating system. For instance, in the system presented here, the local operating system normally restricts its users to two disks mounted per channel; the file server allows up to 255 simultaneous mounts.

The file server thus provides for its client stations a file facility which:
is two orders of magnitude larger than locally supported file systems;
is faster than standard local disk drives;
has more sophisticated structure than local file systems;
allows protection of private data;
allows controlled sharing of data with other stations.
SUMMARY
The Nestar Systems Cluster/One Model A has been commercially avilable since the second quarter of 1980. If offers the advantages of local networks in the context of low cost, readily available personal computers. The system supports a large existing software base with no conversion, and it provides shared access to expensive and sophisticated resources not normally available for individual personal computers.

TITLE: COMMUNICATIONS INTERFACE CARD
PUBLISHED BY: APPLE COMPUTERS INC.

The Communications Interface Card allows you to connect your Apple to modems, CRT terminals, and other devices employing a bi-directional, serial (RS-232C) interface. The card's built-in intelligence lets you control these devices easily in BASIC.
The Communications Interface Card ... requires no external control software, because of its built-in intelligence ... is easily controlled from BASIC or Pascal using simple commands ...offers communications flexibility because it operates at 110 or 300 baud, half- or full-duplex ... provides versatility in device attachment, because it is compatible with the industry-accepted, standard RS-232C Serial Interface.
Parameter Description:
Signal Level: EIA RS-232C
Data Word Format: 1 start bit, 1 or 2 stop bits, 7 or 8 data bits; odd, even or no parity.

TITLE: COMPUTER INTERFACE SETS
PUBLISHED BY: CONNECTICUT MICROCOMPUTER, INC.

A number of AIM 16-based interface sets, including required manifolds and connectors, simplify installation for virtually any micorocomputer. Both plug-compatible systems and those requiring some hard wiring are offered.
At Connecticut microComputer, we are dedicated to the development of accessories and interfaces to enhance the utility of all popular microcomputers. Not only do we allow the boarder application of standard printers and other peripherals, but our data acquisition modules allow the input and control of real world variables such as weight, temperature, pressure, humidity, speed, and fluid level to the computer.

TITLE: CONTROLLER
PUBLISHED BY: HEURISTICS

The Model 70 Controller provides four relay contact-closure outputs on a card which plugs into an Apple II peripheral slot and which is completely controlled by POKE statements in Apple II BASIC. The unit is recommended for use with Heuristics(TM) speechLab and SpeechLink voice data and control input cards for the Apple II, but may be used with any Apple in any application. More than one Model 70 may be used in an Apple.
Specific applications for which Model 70 is recommended include:
Control of low-voltage, low current AC or DC circuits requiring electrical isolation from the Apple Computer.
Providing low speed on-off signaling to external circuits via contact closures (circuit completion) or contact openings (circuit interruption). Pulse rates to 30 pulse/second can be obtained.

Applications for which the Model 70 is suitable include:
Control of model railroads and ships
Control of Security circuits
Low speed computer signaling on telephone 0-75 baud and Type 1000 circuits (so called "burglar-alarm" or DC signaling circuits)
Control of auto-dialer
Control of battery operated devices
Additional control of other peripherals attached to the Apple where circuit isolation provided by relays is important.
The Model 70 is easily programmed in BASIC. A POKE (X), N command is given to select the relay action desired.
Heuristics(TM) voice input peripherals for the Apple Computer can be used to specify the action controlled by the Model 70. Thus direct voice control over external devices may be obtained, completely programmed in BASIC. Commands are given in functional form such as "ON" or "OFF" or "NUMBER," "6", and translated into appropriate contact closures in the BASIC program.
User connections are made to a plug-in connector on the Model 70. The mating connector to which connections can be made is supplied; connections can also be hard-wired to the board-mounted connector.
The Model 70 Controller comes completely assembled and tested. A user manual with demonstration programs is included with the unit. Warranty is one-year from date of purchase, improper use excepted.

TITLE: CORVUS MIRROR
PUBLISHED BY: CORVUS

The Corvus Mirror provides an inexpensive backup device for the Corvus family of Winchester disk drives. Disk drive back-up is provided by a low cost removeable tape cartridge with a total capacity of 100-megabytes. In approximately ten minutes, the contents of an entire ten million byte disk can be transferred onto the MIRROR medium, a standard video cassette (Video Cassette Recorder not included in price).

TITLE: 16K RAM EXPANSION BOARD
PUBLISHED BY: ADROMEDA

Expand your 48K Apple to 64K of programmable memory. Allows you to run Apple's new Fortran package and other languages. Plugs in slot 0. Eliminates the need for an Applesoft or Integer Basic ROM card. Switch selection of RAM or mother board ROM language. Includes instruction manual.
PRICE: $195.00

TITLE: RESET GUARD
PUBLISHED BY: SOFTAPE

Tired of hitting reset by mistake? If so RESET Guard will solve the problem. Reset Guard is a hardware package that plugs directly into your Apple. It protects your programs because it will only reset if hit twice in one second. Guard your Apple and your sanity. Simple plug in.
PRICE $34.95

TITLE: ROM WRITER™
PUBLISHED BY: MH

FASTER THAN A SPEEDING DISK!
Firmware in ROM is as fast as your software in RAM, but in ROM IT FREES UP RAM memory space for companion programs. And, there never needs to be a LOXD from disk! Create firmware for your Apple* by programming EPROM's with RomWriter.
FIRMWARE NOT SOFTWARE.
Many frequently used programs really ought to be installed as firmware. ROM-based firmware permits a "power up and go" configuration. Use RomWriter to create firmware for peripherals such as printers or create program cards. By installing EPROM's that you have programmed on Mountain Hardware's ROMPLUS + ™ board, program cards of up to 12K in length may be created.
FEATURES.
Programs 2716 EPROM's (5V). All 2K or part of the EPROM can be programmed. Installs in a peripheral slot. EPROM's mount in a zero inseration force socket. A switch turns power off to the socket so EPROM's can be inserted or removed without powering-down your computer. A Write Protect switch is provided for programmed EPROM's while running. A $CFFF OFF switch to suppress this command during programming or Running EPROM's can be RUN on RomWriter, or ROMPLUS + ™ when creating firmware systems.
SOFTWARE.
Virtually foolproof programming. Specify a Start and End Address in the EPROM and either a Disk File name or a starting address in memory. Desired code will be burned followed by a VERIFY. Additionally, existing EPROM debugging. Easy data entry and high reliability are designed into RomWriter. Programmed EPROM's can be run while residing on RomWriter or can be transferred to Mountain Hardware's ROMPLUS + as a Firmware Development System for (ROMPLUS + usually separately.) See for yourself how firmware can enhance the power of your Apple system. Drop by your local computer store for a demonstration. RomWriter and Mountain Hardware's full line of computer products are available at dealers worldwide.

PRICE: 175.00

TITLE: THE DITHERTIZERII™
PUBLISHED BY: COMPUTER STATION

Computer Station proudly offers a high speed, low cost binary video digitizer for the Apple II designed by David Hudson. The Dithertizer II is a peripheral board for the Apple II which utilizes a video camera with external sync to load the high resolution page of the Apple II with any image that can be captured with the video camera. The Dithertizer II was designed as a frame grabber, DMA type, digitizer to require only one frame or 1/60th of a second to capture a binary image (140 nanoseconds per pixel). Software is included to build dithered (psuedo gray scale via half tones) images from multiple binary images and to capture image intensity contours using image subtraction (2 frames required). The number of frames required to produce a dithered image is dependent on the dither matrix size. A 2x2 matrix requires 4 frames; a 4x4 matrix requires 16 frames. The software supplied allows the user to select and change the matrix size and view the effects on the monitor. In addition to being able to adjust matrix size, the user may also adjust contrast and density of the image with the game paddles. Most inexpensive digitizers are of the column grabber type. These digitizers typically capture one column per video frame. Since the Apple II has 280 columns this type digitizer would reuire 280/60ths of a second (4 2/3 seconds) to

capture an image.
The Dithertizer II requires a video camera with external sync.
PRICE: Stock #7010 Dithertizer II - $300.00
Stock #7011 B&W Video Camera (Sanyo #VC 1610X) - $410.00
Stock #7012 Dithertizer II Package Video camera (Sanyo - Model #VC1610X) - $650.00

TITLE: DIGI-KIT-IZER
PUBLISHED BY: TALOS

What it means to you.
(1): a high-value low-cost computer graphic input device designed to be assembled by the user (2); the most advanced graphics tablet in kit form (3); An instrument that, when assembled, allows the user innumerable methods of design and analysis functions (4): the latest addition to the most extensive, accurate and reliable line of digitizers, by Talos.
No adjustments. No calibration.
OPTIONS:
APPLE Interface
TRS-80 Interface
RS232 Interface
Power Supply
Super Graphics Software
TYPICAL APPLICATIONS
INTERACTIVE GRAPHICS - Origination or modification of computer - generated images projected on a CRT.
ARCHITECTURE - Calculation for layouts, material take-offs and cost estimates.
CARTOGRAPHY - Input for mapping/plotting of natural resources, ocean floors, forest or crop areas, cut and fill determination, terrain profiles and subdivisions.
COMPUTER-AIDED DESIGN - Speedy, efficient analysis of alternate designs. Permits part and circuit parameters to be varied; component performances to be optimized.
DATA ENTRY - By creating a menu on the digitizer surface, selection of a desired graphic representation may be initiated directly by a computer subroutine. This eliminates keypunch time, errors, and cost, as well as need for skilled operator training. Virtually limitless applications in education, manufacturing, accounting, retailing, fast-food operations and insurance.
GRAPHICS ARTS - Communication and storage of images, image-enhancement and labor-saving computer printing of combined photo/text matter.
MATHEMATICAL ANALYSIS - Comparative display of scientific research data and visualization of diverse factors not otherwise evident.
MEDICAL AND DENTAL ANALYSIS - Ventricular volume, pressure/time curve, data reduction, dosage calculations from x-ray photographs, orthodontry projections.
MOTION PICTURE FILMS - Inexpensive, computer generation of films complex subjects - composition of harmonic-phasors, periodic wave-forms or cartoons.
SPECIFICATIONS
Functional:
Active surface area: 11" x 11"

Resolution: 200 lines/inch (.005")
Data Rate: 100 coordinate pairs/second
Operating Modes: Point and continuous (JUMPER selectable)
Transducer: Pen-Type stylus pressure on tip activates "pen down"
Alignment: None
Calibration: None
Packaging:
The DIGI-TIZER-KIT consists of three circuit boards and parts to be mounted on these boards. The grid board is 15" x 15", with a double-sided grid pattern. The control and output boards hold most of the electronic components and are attached underneath the grid board. The complete tablet measures 15½" x 15½" x 1½". The DIGI-KIT-IZER comes standard with I.C. sockets for easier installation of I.C.'s, and a blue unit enclosure. A soldering iron, needlenose plier, wire cutter, and screwdriver are required for assembly.
Power Requirement:
Input Power: + 15VDC @ 0.25 A regulated.
Input/Output Connector:
Type: 26 pin edge connector
Mate: 3M 3462
Output:
Standard: 16-bit parallel binary, or BCD, bisequential format, TTL compatible.
Options:
RS-232 Baud rate is externally selectable from 50 to 9600
15VDC power supply
Apple interface board
TRS-80 interface board
Super graphics software for Apple.

TITLE: DIGIT BCS A/D CONVERTER
PUBLISHED BY: CALIFORNIA COMPUTER

The 7470 allows conversion of a DC voltage to a BCD number for computer monitoring and analysis. Typical inputs would be DC inputs from temperature or pressure transducers.
Selectable interrupt on end of conversion
200uS per conversion
-4 to + 4 VDC full scale
Plus or minus .05% nonlinearity
Plus or minus 1 count quanitization
Correctable offset error
Temperature coefficient adjustment
Calibration adjustment
Input offset adjustment
Floating inputs
Overrange and sign indicators
Input filter
Power down ROM
Supports interrupt daisy chain
Allows DMA daisy chain
256 byte firmware (ROM) or software (RAM) space available

TITLE: APPLE DISK II FLOPPY DISK SUBSYSTEM
PUBLISHED BY: APPLE COMPUTER INC.

The Apple Disk II Floppy Disk Subsystem increases the capability of your Apple Computer System through the use of flexible, or "floppy", disks for data storage. Expanded memory capacity, greater data retrieval speed, and random access to your stored data — all of these, and more, are made available through the Disk II Subsystem. Whether you use your Apple with a Disk II in business control inventory, or at home for household management, you'll find that it's the superior answer to your data storage needs.

The Apple Disk II Floppy Disk Subsystem ... optimizes efficiency by offering one of the highest storage capacities available with any personal computer on today's market ... offers an economical advantage over the other disk drives, by providing one of the lowest storage costs per character of any personal computer disk drive ... increases productivity by allowing you to access data much more quickly than is possible with cassette tape ... makes possible a wide range of computer applications by allowing software to access data ... provides for greater system expansion than is possible with any other personal computer system, because it supports up to three interface cards and six disk drives.

The Disk II drive, unlike the Apple II, is a mechanical device with motors and moving parts. Understanding the principle behind the Apple Disk II drive is as simple as understanding the way a phonograph turntable works. Disk II has been designed in the same manner, although it is enclosed in a special cabinet. The record, or "diskette", is flexible ("floppy") and fits on a spindle inside the drive. The drive turns the diskette at much faster speeds than a phonograph turns a record.

Within the drive, a special record/playback head replaces the phonograph needle, and it reads the diskette the way a tape head reads an audio cassette. The head is mounted on a positioner, the counterpart of the phonograph arm, and it moves the head laterally across the floppy diskette to any area requested by the computer program. This capability is called "random access". It allows you to retrieve information from the diskette much more quickly than is possible with cassette tape.

Apple's Disk II may be purchased with or without a controller; however, the first one you buy must have the controller in order to interface the Disk II system to your Apple. Because each controller supports two disk drives, you'll be able to attach a second drive to it when you wish to expand your system. Your Apple will support a recommended maximum of three interface cards and six drives.

In addition to the advantages offered by a disk storage system, you'll also receive a special disk operating system program (DOS) when you purchase a Disk II with controller. It automatically keeps track of your files, saves and retrieves information on a diskette, and performs a variety of other functions.

To use the Apple Disk II Floppy Disk Subsystem, you will need:
Apple II or Apple II Plus, each with a recommended minimum of 32K memory.
Format:
Sectoring: soft (hard-sectored diskettes may be used)
Recording Surfaces: one
Tracks per Surface: 35
Capacity:
Formatted data capacity per surface, bytes: 116K, 13 sector (with DOS 3.2.1 and earlier software) 143K, 16 sector (with Pascal and DOS 3.3)
Available data capacity (after DOS) per surface, bytes: 103K, 13 sector (with DOS 3.2.1 and earlier software) 127K, 16 sector (with Pascal and DOS 3.3)
Characteristics:
Head movement time — Track to track, msec: 25. Across all tracks, msec: 600.
Head load time, msec: 50
Average rotational delay, msec: 100

Data transfer rate, bits per second: 125:
Packaging:
Controller: PC board that plugs into one of the Apple's eight expansion slots
Driver per controller: 2
Drive dimensions (h x w x d), inches: 3.25" x 5.75" x 8.0"
Weight (pounds): 3
Power source for drives: Apple system power supply.
With your order for a Disk II drive with controller, you will receive:
Apple Disk II drive (the main box);
a printed circuit card (the controller) that plugs into the Apple;
a flat ribbon cable already fastened to the disk drive, for connecting the disk drive to the controller card;
System Master diskette (DOS);
blank diskette;
warranty card;
adhesive labels;
DOS Instructional and Reference Manual.
With your order for a Disk II without controller, you will receive:
Apple Disk II drive (the main box);
a flat ribbon cable already fastened to the disk drive, for connecting the disk drive to a controller card;
warranty card;
adhesive labels.

TITLE: FIXED DISK SYSTEM
PUBLISHED BY: LOBO DRIVES

The IMI7710 is 11 megabytes of cost effective, fixed disk memory. Using Winchester tehcnology, applications for this versatile system exist throughout the entire field of mini and micro computer data storage, especially in word processing and small business systems. The drive uses "Winchester" type heads characterized by the low mass, lightly-loaded slider. The Winchester head is designed to take off and land on the disk surface, virtually eliminating head crashing, and totally eliminating the mechanical paraphernalia necessary to load and unload the head to and from the disk. The recirculating air system within the sealed cover provides the contamination-free environment necessary for the low-flying heads. All components and subassemblies are mounted in fiberglass-reinforced polyester having thermal properties closely parallelling those of aluminum. Physical configuration; Height 5.50", Width 8.57", Depth 19.25", Weight 60 lbs. Recording characteristics and data: recording capacity of 11 megabytes, transfer rate of 648 K bytes average access time 50ms. Power consumption is only 100 watts.
Environment is 50 to 120 degrees Fahrenheit, relative humidity to 20 to 80 percent, non-condensing. The unit comes with the IMI7710 disk drive, separate power supply and one board interface/controller for the Apple II. The system uses the Apple II DOS and is therefore totally compatible with all software. One year parts and labor warranty. Quantities limited - so reserve yours today! Requires 32K of memory.

PRICE: $4995.00

TITLE: HARD DISK DRIVE
PUBLISHED BY: CORVUS
MEMORY: 10 MEGABYTE DISK DRIVE

The CORVUS 11T is an intelligent peripheral that adds cost effective mass storage to the APPLE computer, while maintaining TOTAL COMPATIBILITY with existing hardware and software. The system package consists of the IMI

7710 "Winchester" hard-disk drive with Corvus intelligent controller, a complet power supply, and an intelligent module for the APPLE, consisting of an interface card and its associated software.
The Corvus Intelligent Controller is based on the Z80 processor with 16K of Random Access Memory. Firmware for this controller provides such features as: Sector Buffering, Read after Write error recovery with automatic retries, Error statistic monitoring and diagnosis. Transparent formatting with CRC error detection, High-speed data transfer utilizing DMA.
The Corvus system interfaces to the APPLE processor by means of a standard interface card which is inserted into slot 6. This interface and associated controller can support four disk drives in a simple daisy chain. The interface card provides a buffered parallel I/O that is capable of transferring data at a rate of over 50 kilobytes per second. The system software is contained in a two thousand byte ROM which adheres to all APPLE standards for such a device. The ROM-resident software is effectively interfaced to both the DOS 3.2 basic operating system and the new APPLE PASCAL operating system. In both systems all disk drives (APPLE supplied floppy and/or the CORVUS 10 Maegabyte drive) are online simultaneously. Both operating systems remain unmodified at all times for 100% applications compatibility. Data from both systems may reside on a single drive.
The corvus 11AP comes with over a dozen utility programs to make your use of the disk easier. These include programs to copy Corvus volumes from and to floppy diskettes, utilities to format new volumes, programs to switch between BASIC and PASCAL and many more.
Corvus 11AP7#8-11-A (45 lbs.)
Corvus 11AP/A#8-11-AA (45 lbs.)

TITLE: PROGRAMMA EXPANDA-PORT
PUBLISHED BY: PROGRAMMA INTERNATIONAL, INC.

The PROGRAMMA EXPANDA-PORT is a multi-port expander for the game I/O port of any APPLE II Computer System. In addition to allowing expansion for up to six devices, the EXPANDA-PORT contains a built-in speaker that replaces the function of the Apple II's speaker. The switch on the EXPANDA-PORT allow for the selection of the specific device desired and for the switching of that device. No unplugging of any device connected to the EXPANDA-PORT is required. The PROGRAMMA EXPANDA-PORT comes completely assembled and tested.
PRICE: $59.95

TITLE: PASCAL FAST FLOATING POINT BOARD
PUBLISHED BY: COMPUTER STATIONS, INC.

For the APPLE II or APPLE II PLUS, designed by David K. Hudson requires Pascal Language system.
Computer Station's Fast Floating Point Board is designed to enhance the arithmetic speed of the Apple II with UCSD Pascal. This board utilizes the AM9511 Arithmetic Processor and plugs directly into the Apple II to relieve it of the task of doing higher level math functions in softare. In addition to the transcendental functions supplied with Apple's UCSD Pascal, the user also has available TAN, ASIN, ACOS, SINH, COSH, and TANH and the constants 'pi" and "e". The following Pascal program was used to benchmark the standard "TRANSCEND" Library functions against the FFP Board "TRANSAM" Library functions. Time to complete the 5000 loop is expressed in seconds.
PRICE: $450.00

TITLE: EPROM ADAPTER SOCKET
PUBLISHED BY: MICROPRODUCTS

Allows 2716 type EPROMS to be used in your Apple II ROM sockets.

PRICE: $14.95

TITLE: EPROM BOARD
PUBLISHED BY: MICROP

Microproducts also carries EPROM boards which permit addition of 10K to 12K byte increments of ROM memory to your APPLE II. Each board can accommodate up to six EPROMs and your APPLE II can accommodate up to 8 boards at a time.

The EPROM individual memory boards must be bank switched by either hardware or software, of course, since the APPLE II can only handle 12K bytes of ROM simultaneously.

Socket adaptors are not required for the EPROMs when used with the EPROM board.

TITLE: EPROM PROGRAMMER
PUBLISHED BY: MICROP

EXPAND YOUR ROM SOFTWARE

Add capability to your system monitor or BASIC for business or other applications. Add commands to the operating system. New operating systems can be put into EPROM memory with our EPROM programmer and plugged directly into your Apple II board with our EPROM socket adaptor. The microproducts EPROM Programmer will program INTEL 2716s, 2758s and other 5-volt replacements for 2716s.

Add to or replace existing Apple II Rom software with operating systems of your own design. Other software systems similar to PASCAL, FORTH, SISP, APL, FORTRAN, COBOL, ALGOL, other BASICs etc. may be incorporated into your APPLE II ROM space.

The EPROM Programmer looks just like memory to the computer and can be configured to program memory locations from 8000 to FFFF for a total of 32K bytes. This means that the EPROMS can be used in computer applications other than the APPLE II, i.e., the microproducts SUPERKIM, etc. This turns your APPLE II into a very low cost, powerful, software development system.

FEATURES:

Fully assembled and completely self-contained
Zero insertion force socket for EPROM
On-board 25 volt power supply
Double sided plated through holes on fiberglas PC board
Gold plated edge connectors
Fully socketed
Solder mask

TITLE: EPROM PROGRAMMER
PUBLISHED BY: MICORPRODUCTS

Your Apple II came with ROM chips containing, among other things, the BASIC interpreter. The advantage of this is the ease of using programs in ROM - a few keystrokes and the program is up and running. With the EPROM programmer, you can "burn" your own assembly language programs and routines on an EPROM, providing quick and easy access to your routines. In effect, you are custom-tailoring the computer's functions to your own specific needs. Allows you to implement a turnkey type system. Uses the 2716 EPROM.

PRICE: $99.95

TITLE: EROM #1
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

Requires Applesoft ROM & ROMPLUS. CRAE'S powerful Global change/find, optimizes List Command, Hex to Decimal and Decimal to Hex conversion now available on a 2716 EROM.
48K.
PRICE: $69.95

TITLE: EROM #2
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

REQUIRES APPLESOFT ROM AND ROMPLUS.
CRAE'S Autoline numbering, formatted memory Dump, Append, Number Conversion (Hex/Dec) on one 2716 EPROM.
48K.
PRICE: $49.95

TITLE: EROM #3
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

CRAE'S powerful Renumber and Quote function now on two 2716 EPROMS.
48K.
PRICE: $49.95

TITLE: EXTENDER BOARD
PUBLISHED BY: CALIFORNIA COMPUTER

Is a handy tool when debugging or testing modules in the Apple II™.

TITLE: EXPANDRI1
PUBLISHED BY: CONNECTICUT MICROCOMPUTER, INC.

The Xpandr1 allows up to eight input/output modules to be connected to the computer in place of a single AIM 16, using appropriate cabling. For instance, seven AIM 16's plus an X-10 module can significantly enhance the computer's data gathering capacity.
At Connecticut microComputer, we are dedicated to the development of accessories and interfaces to enhance the utility of all popular microcomputers. Not only do we allow the boarder application of standard printers and other peripherals, but our data acquisition modules allow the input and control of real world variables such as weight, temperature, pressure, humidity, speed, and fluid level to the computer.

TITLE: EXPANDA-PORT
PUBLISHED BY: PROGRAMMA

The PROGRAMMA EXPANDA-PORT is a multi-port expander for the game I/O port of any Apple II Computer System. In addition to allowing expansion for up to six devices, the EXPANDA-PORT contains a built-in speaker that replaces the function of the Apple II's speaker. The switched on the EXPANDA-PORT allow for the selection of the specific device desired and for the switching of that device. No unplugging of any device connected to the EXPANDA-PORT is required. The PROGRAMMA EXPANDA-PORT comes completely assembled and tested, including a User's Guide.

PRICE: 59.95

TITLE: GENERAL PURPOSE INSTRUMENT BUS INTERFACE (GPIB)
PUBLISHED BY: CALIFORNIA

Implements Controller/Talker/Listener function of IEEE STD 488-1978.
The General Purpose Instrument Bus is widely used in the instrumentation fields for the interconnection of test instruments with a Controller (The Apple II with 7490A) for automated testing and measurement.
The 7490A GPIB Interface makes the Apple II into a powerful GPIB Controller to control large test systems or a single GPIB instrument. When used as a Talker/Listener on the GPIB, the Apple II may act as a peripheral device to another Controller, i.e., a color graphics output device.
Allows control of GPIB test equipment by an Apple II computer
Allows Apple II to act as a peripheral to a large system with GPIB
Can request service as a Talker/Listener, or respond to service requests as a Controller.
Allows Apple II to make instrumentation measurements and display the data in color using the Apple II using color graphics capability.
Useable with BASIC (Applesoft or Apple Integer BASIC).

TITLE: GREENPLUS
PUBLISHED BY: COMPUTER RESEARCH & TECHNOLOGY

Transform your black and white monitor (or TV) into a GREEN VIDEO DISPLAY with GREEN + PLUS, a high quality custom cut transparent shield which attaches in just minutes to your monitor. No tools are required.
• Specially designed to reduce eye fatigue • A sharper, crisper image • Designed by an Industrial Designer and a Software Programmer • Provides maximum clarity.

PRICE: $14.95

TITLE: HOME CONTROL
PUBLISHED BY: CJM

This unit, designed by Steve Ciarcia, will allow your APPLE to control lights and appliances in your home. The Busy Box interface card plugs into any of the available slots in the APPLE. Signals are sent from the Busy Box to a BSR System X-10 Command console. Signals are then relayed through your house wiring to the designated module (which simply plugs into any standard AC outlet). The assembled and tested interface is housed in an attractive plastic case. Comes complete with power supply and connecting cable. The manual contains a BASIC language listing for a simple control routine, which will work in 8K memory.

#4-02 (5 lbs)
BSR SYSTEM X-10 Kit, contains Command Console, cordless controller, two lamp modules and one appliance module.

TITLE: INTERFACE BRAIN
PUBLISHED BY: MICROPRODUCTS

This device plugs directly into your Apple II computer to provide permanent memory intelligence for versatile, flexible and inexpensive so-called "dumb" peripherals interfaces. It supplies the permanent full-time availability of firmware drivers for the Centronics 779, PR-40 and OKIDATA printers as well as the Microproducts EPROM Programmer the instant your computer is switched on. It allows the flexibility of a user changeable EPROM where situations of software or hadware update indicate a change is desirable or necessary. This EPROM is set in a Microproducts EPROM Adapter socket to permit direct insertion into the D8 ROM slot on your Apple. Documentation is included for you to master its operation.
PRICE: $59.95

TITLE: X-10 REMOTE CONTROL INTERFACE
PUBLISHED BY: CONNECTICUT MICROCOMPTUER, INC.

The Super X-10 remote control interface provides direct, plug-in sensing and computer control for home security, energy, conservation, greenhouse, environmental control, industrial control, and laboratory applications. Retains and activates stored sequence even with computer off. Computer readable clock and calendar are included.
At Connecticut microComputer, we are dedicated to the development of accessories and interfaces to enhance the utility of all popular microcomputers. Not only do we allow the boarder application of standard printers and other peripherals, but our data acquisition modules allow the input and control of real world variables such as weight, temperature, pressure, humidity, speed, and fluid level to the computer.

TITLE: INTROL/X10
PUBLISHED BY: MOUNTAIN HARDWARE

COMPUTERIZE YOUR HOME.
The Introl/X-10 perpheral system for your Apple* Computer allows you to remotely control lights and electrical appliances in your home.
YOU'RE ALREADY WIRED.
Introl/X-10 operates by utilizing your computer's intelligence to command the BSR System X-10 to send signals over regular 110 volt household wiring. That means you can control any electrical device in your home without additional wiring.
READY TO USE.
Introl/X-10 comes with complete software to control devices on pre-determined schedules, and features:
Control devices at a specific time. Select a daily or weekly schedule. Specify a day of the week, or an exact date for a particular event. Specify an interval of time for an event. Rate device wattages for a running account of power consumption during your schedule for energy management. Used with our Apple Clock™ your schedules may run in "background" while other programs may run at the same time in "foreground."
EVERYTHING YOU NEED.

The Introl Controller board plugs into a peripheral slot of your Apple. With an ultrasonic transducer it transmits control signals to the BSR/X-10 Command Console which may be plugged into any convenient AC outlet near your computer. On command, signals are sent to remote modules located at the device you wish to control. Up to 16 remote module addresses may be controlled from your Apple. Software requires Applesoft Firmware.
AVAILABLE NOW.
The Introl/X-10 System consists of the Introl Controller board with timer and ultrasonic transducer, the X-10 Command Console and three remote modules. Complete and tested. If you already have a BSR System X-10, the Introl Controller board is available separately.
Additional remote modules are available at $15.
PRICE: INTROL X/10 SYSTEM, 300.00
INTROL X/10 Controller, 200.00

TITLE: JOYPLES!
PUBLISHED BY: NILONEL MFG.
The Dual Joystick system with the most appropriate shape for the APPLE II computer.
Joyples come ready to plug in to your APPLE II Game I/O Port.
Each Joyple is a delicious red, hard plastic apple, with its own pushbutton and multi-direction joystick.
PRICE: $39.95
Joyples let you create exciting action games for 1 or 2 players. Here are a few that we offer:
CHARGE THE NET, Tennis — Joyples let you move your paddles in all directions.
PRICE: $12.95
TANK ASSAULT — You control the speed & direction to attack your enemy
PRICE: $12.95

TITLE: A2D/JOYSTICK
PUBLISHED BY: A2D
A2D/Apple Joy Stick for computer games and graphics. Plug-in compatibility for Apple II I/O Connectors. Precision open gimbaled self centering action in heavy gold vinyl clad aluminum case (not vac formed). Nice hand-held design with two game control push buttons. Our open gimbal has less drag than bale sticks — was really developed for championship acrobatic R/C flying. Comes with 6' long cable. About 500 have been in use for one year.

TITLE: JOYSTICK
PUBLISHED BY: PROGRAMMA INTERNATIONAL
The game controls supplied with the Apple II are fine for simple single function control, but are quite limited. In many situations a two-dimensional control is desired. The joystick is a versatile control which can be easily plugged into the Apple II in place of the standard game paddles, providing x/y coordinate control over the cursor position on the screen. 3 pushbuttons are provided to signal the Apple II. The joystick is a GREAT game and graphic accessory, and many programs are available which require or are enhanced by the use of joysticks.
PRICE: $49.95

TITLE: KEYPAD
PUBLISHED BY: ADVANCED BUSINESS TECHNOLOGY

This data entry keypad simplifies tedious numerical entry tasks, providing 13 keys (0-9, demical point, minus sign, and ENTER) in a standard accounting layout, with double-width "0" and "ENTER" keys. Exceptionally reliable, its low-profile design facilitates either desk-top or hand-held use. The unit measures 1.5 in. high by 3.4 in. wide by 3.6 in. long and is attached to the computer via a three-foot cable and a 40-pin connector that plugs into the decoder IC socket on the Apple II keyboard sub-assembly. No soldering is necessary, and no I/O slots are used up. You must specify whether you have a new Apple keyboard (with the control RESET option switch), or an old one, as this will make a difference in ordering.

PRICE: $125.00

TITLE: THE KVA II
PUBLISHED BY: CALIFORNIA MICRO PRODUCTS

Now — a VisiCalc — compatible keypad for your Apple II and Apple II Plus. Our new keypad model KVA II is compatible with any software package, including VisiCalc and Controller.

BENEFITS

NUMERIC KEYPAD MEANS DATA ENTRY SPEED: Now — Speed up data entry in your BUSINESS, SCIENTIFIC, and EDUCATION applications using the California Micro Products KVA II Numeric Keypad.

ADDED FUNCTION KEYS: Popular function keys plus numeric keys at your fingertips in a convenient arrangement.

EASY TO USE: Absolutely NO programming. Just plug it in and use it, simultaneously with main Apple Keyboard. The key layout pattern is a style familiar to calculator users. Additional function keys decrease the amount of hand motion required for data entry.

EASY TO INSTALL: Simply mount the Keypad Controller inside the Apple case, mate the plug-in connections, and it's ready to use.

STANDARD FEATURES

Compatible with both Apple II and Apple II Plus.
Works with all Apple II and II Plus software-VisiCalc, Controller, etc.
Easy plug-in installation, no soldering required.
Plugs into Apple motherboard-all parts furnished.
Requires no I/O expansion slot.
No programming required.
Does not interfere with standard keyboard.
Attractive sloped-front enclosure with Apple II compatible color and texture.
Soft NO-Mar feet to prevent sliding.
10 numeric keys (with double width O).
8 function keys-right/left cursor, minus, plus, escape (ESC), space, return (double-width), and period.
A 5 foot cable allows positioning for operator's convenience.
Cursor left/right for easy correction.
May be used simultaneously with computer keyboard-"transparent" to Apple Keyboard and software.
Does not affect encoder circuit.
90 day warranty, parts and labor. Return to manufacturer.

PRICE: $199.00

TITLE: LIPSON LIGHT PEN
PUBLISHED BY: PROGRESSIVE SOFTWARE

15 programs on disk. Plugs directly into game I/O. 90 day guarantee on pen. Include $3.00 postage & handling.

PRICE: $29.95

TITLE: LIGHT PEN, BRIGHT PEN
PUBLISHED BY: SOFTAPE

This is a remarkably inexpensive device which allows you to communicate with your Apple II by simply touching a "pen" to the display screen. The Apple II can then sense the screen position of the spot touched and take action accordingly.The LIGHT PEN plugs into the Apple II in place of the standard game paddles, and comes with demonstration programs and all the necessary routines to make it easy to use the light pen in your own programs. Includes a manual that guides the user's first programming efforts. LIGHT PEN comes fully assembled and tested, ready to plug in and use.

PRICE: $34.95

TITLE: LOWER CASE + PLUS
PUBLISHED BY: LAZER SYSTEMS

This new plug in board does more than allow you to put lower case on the screen in normal and inverse characters. It has two complete character sets on board. The primary character set is a word processing set that will place the two character control function on the screen if the control character is placed on the screen. The second character set is a HI-RES graphics set that has shapes predefined such as cars, space ships and abstract graphics for a multitude of other designs that you may want on the text screen. The character set to be used can be controlled by manual or software switching through the expansion socket provided. The expansion socket will also allow the use of an external RAM based character set that you can define and re-define similar to the APPLE III. It also has RESET key disable capability that can also be controlled through the expansion socket. the LOWER CASE + PLUS comes complete with supporting software on diskette and a 16 page documentation manual.

PRICE: $59.95

TITLE: MICROBOX
PUBLISHED BY: CJM

MCIROBOX and MICROSTIK provide Apple owners with the hardware to explore the input/output capabilities of their computers.

A SIMPLE COMMAND from the Apple kayboard or a Basic Program can switch an external device. Connect AC loads, such as lamps, motors, relays or solenoids directly through the MICROBOX's 4 AC OUTLETS. Loads can range from 0 to 220VAC and draw up to 200 Watts each. Solid State Switching ISOLATES the load from your Apple for complete safety. Four LEDs provide a visual on/off status of each load.

A Complete Instruction/Tutorial Manual is included with the MICROBOX.

The MICROSTIK is a sturdy, two axis joystick. Metal Cable Connectors assure trouble free usage over time, and enable extension cables to be added easily. Use the MICROSTIK to add real-time input to your game, graphic or experimental programs. Each MICROSTIK contains a PUSHBUTTON for added input possiblities.

TITLE: MICROCOMPUTER INTERFACES
PUBLISHED BY: CONNECTICUT MICROCOMPUTER, INC.

Simple, plug-in interfaces for PET, TRS-80, APPLE, and KIM microcomputers allow the use of low-cost, CmC data acquisition and control modules for reading temperature, light levels, pressures, and voltages, and for basic appliance, equipment, and control applications.

At Connecticut microComputer, we are dedicated to the development of accessories and interfaces to enhance the utility of all popular microcomputers. Not only do we allow the boarder application of standard printers and other peripherals, but our data acquisition modules allow the input and control of real world variables such as weight, temperature, pressure, humidity, speed, and fluid level to the computer.

TITLE: MODEM IIB (NOVATION CAT)
PUBLISHED BY: APPLE COMPUTERS INC.

Modem IIB is a communications package that extends the power of your Apple by allowing it to tap the resources of timesharing services, computerized bulletin boards or your office computer from the comfort of your own home. It allows you to transfer programs to a friend's Apple over the telephone network. It even permits you to control an Apple in San Francisco from another computer in New York. And, with programs like Apple's Portfolio Evaluator, it makes your Apple an intelligent terminal, able to request and process information from large remote data bases.

The coupler is a 103A-type asynchronous device, suitable for data communications at 110 or 300 baud (10 or 30 char/sec). It operates in either the Originate or Answer modes. Conneciton to the phone system is accomplished by placing the telephone handset in position on top of the modem. No permanent connection or wiring changes are required.

With your Modem IIB order you will receive:
Acoustic coupler (modem);
Apple Communications Interface Card (optional);
Demonstration Tape;
Connecting cable;
Documentation.

TITLE: MICROMODEN II*
PUBLISHED BY: D.C. HAYES

Install Micromodem II™ and watch the dawn of new uses bring back the excitement of discovery in your Apple II. The Micromodem II package lets your Apple II communicate with any other on-line computer in North America. You can send and receive information - automatically - from across town or across the continent on standard telephone lines. Image the communication possibilities for business information, educational uses, scientific applications and computer games!

The Micromodem II changes computer signals into telephone compitable signals. The accompanying Microcoupler™ connects directly into the standard modular telephone wall plug. They can send or receive calls automatically whether you are calling the local Apple Bulletin Board or accessing an information service from across the continent. You can even take advantage of low evening and weekend rates on the telephone lines.

*Registered trademark of Apple Computer, Inc.
™Micromodem II and Microcoupler are trademarks of D.C. Hayes Associates

APPLECATIONS

The following categories are presently available from remote computer services.

Many of them are obtainable from a centralized service. Some are specialized services available from only one supplier. The Micromodem II and D.C. Hayes Associates provide you with the opportunity to access you with these programs. WE DO NOT PROVIDE THE PROGRAMS.

HOME AND HOBBY
Electronic Mail
Restaurant Listings & Reviews
Computer Game Library
Computer Graphics
Gourmet Meal Recipies
Syndicated Home Entertainment Features
Balancing Checkbook
Income Tax Assistance
Financial News and Commentary
Airline, Hotel, Motel and Rental Car Reservations
Biorhythms
Daily Horoscope
National Real Estate Locator Services
Nutrition Analysis

BUSINESS
Accounts Payable
Accounts Receivable
General Ledger
Payroll
Net Cash Flow
New York Stock Exchange
American Stock Exchange
Commodity Prices and Futures
Financial Commentary
Foreign Exchange Rates
Gold, Silver, and Platinum Prices
UPI Wire Services
Calculator
File, Editing and Sorting
Programming in Extended BASIC, FORTRAN, COBOL RPG, PASCAL

EDUCATION
Accessing College Computers
Languages: French, German and Others
Algebra
Social Services
Federal Financial Aid Programs
Typewriter Keyboard Drills
Installment Loan Annual Interest
Financial News
Reference Manuals and Programming Guides

SCIENCE AND INDUSTRY
Electrical Engineering
Mechanical Engineering
Comptuer Simulations

Statistics
Program Debugging
System Commands
Fuel Management
Thermal Hydraulics
Heat Transfer
Architectural Engineering
Circuit Analysis
Dependent Variables
Three Dimensional
Analysis of Structure

There are many more specific programs available from the remote computer service companies. D.C. Hayes Associates, Inc. manufacturers the Micromodem II and the Microcoupler, and does NOT provide remote computer services.

TITLE: SUP'R'TERMINAL
PUBLISHED BY: M&R ENTERPRISES

80 Columns by 24 lines, upper and lower case; all 128 ASCII characters.
Upper and Lower case data entry using the APPLE II keyboard.
Includes an Upper and Lower case 5X8 dot matrix ASCII character set, and inverse alpha characters.
Expands existing keyboard for more ASCII characters.
Character set can be user definable.
Includes VBC(TM) (Video balance circuit) which enables the use of displaying 80 columns on an inexpensive 8MHz CRT monitor.
Works with LEEDEX monitor (version 2.2) and other inexpensive CRT monitors.
Shift Lock Feature.
KEYPRESS function for PASCAL Programs supplied.
Works with APPLE PASCAL and APPLE BASIC.
Incorporates PASCAL and BASIC control characters.
Follows protocols of PASCAL and BASIC operating systems.
ALL monitor-type escapes are valid.
Compatible with ALL APPLE II peripherals.
Effective baud rate greater than 10,000; fast scrolling and clearing.
Can be used with APPLE II communication interface board to act as self contained terminal for time-sharing or other applications. Terminal program supplied when used with a D.C. Hayes micromodem.
3K bytes of bank switched static ram.
2K bytes of ROM.
The only board with continuous direct memory mapped screened ram.
The only board that interprets VTABS by firmware (version 2.2)
The only board with an adjustable scrolling window.
The only 80 column board that is synchronous with the APPLE II.
Fully programmable cursor.
Conversion program supplied to modify existing APPLESOFT programs to work with SUP'R'TERMINAL (automatically converts HOME, CALL-936 and VTABS) (version 1.0).
Works with the new Easywriter and APPLE PI word processors.
Uses less current on the +5V supply than any other 80 column board.
Works with CORVIS hard disc system.

TITLE: 80 X 24 DISPLAY CARD/BIT 3® FULL VIEW™-80
PUBLISHED BY: BIT 3 COMPUTER CORPORATION

The FULL-VIEW 80 provides 80 x 24 display for your Apple II yet retains the standard Apple II 40 character and graphics operating mode. The standard Apple II display is selectable via a keystroke or under program control, giving the user a full view of all display modes without re-cabling or toggling switches.
A professional quality 7x9 dot character size model is available as well as a 5x7 dot character size. The 5x7 dot character size is suited for 8 MHz and other low performance monitors. Both models have upper and lower case characters. Either model can be converted to the other via a switch setting if the user has both character generators.
Custom designed character sets are available via EROM in place of the character sets described above. The EROM Character Generator Adaptor accepts either 2732 EROMs (for 255 characters) or 2716 EROMs (for 127 characters). Characters can be defined within cell sizes as large as 8x16. Preprogrammed Bit 3 character fonts including line drawing graphics are available.
On-board 2K firmware in ROM provides full keyboard editing, complete cursor control and tabbing. Several operating modes are available including the capability to read the display refresh memory. The firmware incorporates PASCAL and BASIC protocols so the user does not have to enter machine language programs or change PASCALS, MISCC. INFO, or GOTOXY files.
Additional Features: Works with Apple II, Apple II Plus and Apple PASCAL
Compatible with all Apple II peripherals.
Can be used with the D.C. Hayes Micromodem™ or the Apple II communications card to act as a self-contained terminal for timesharing or other applications.
Lowest current requirement of any 80x24 card on the market.
Real time 1/60 second nonmaskable interrupt clock provides capability for the user to time events in background mode programs.
Keyboard shift lock identified by blinking cursor. Unshifted keyboard identified by non-blinking cursor.
50/60 Hz operation.
Inverse or normal characters
Light pen connector. Light pen is supported in firmware.
Crystal controlled clock for excellent character quality.
127 displayable characters standard.

PRICE: $395.00

TITLE: TEMPSENS AND LITESENS
PUBLISHED BY: CONNECTICUT MICROCOMPUTER, INC.

The Tempsens module, operating with a -10°F to +160°F range, provides two temperature probes for the AIM 16, each with 1°F resolution. Another input module, Litesens, is a single probe light sensing device.
At Connecticut microComputer, we are dedicated to the development of accessories and interfaces to enhance the utility of all popular microcomputers. Not only do we allow the boarder application of standard printers and other peripherals, but our data acquisition modules allow the input and control of real world variables such as weight, temperature, pressure, humidity, speed, and fluid level to the computer.

TITLE: THUNDERCLOCK PLUS
PUBLISHED BY: THUNDERWARE INC.

The THUNDERCLOCK PLUS is two peripheral systems on one card for your APPLE II. It contains an accurate, reliable, real-time clock/calendar and an interface for the popular BSR/X-10 Home Control System.

THE THUNDERCLOCK

The THUNDERCLOCK PLUS clock/calendar makes accurate time and date available to your programs: month, date, day-of-week, hour, minute and second. In any of four software selectable formats. On-board batteries keep your THUNDERCLOCK running accurately when your APPLE II is turned off — for up to four years before battery replacement. On-board 1K firmware makes reading or setting the time easy from APPLESOFT or INTEGER BASIC, PASCAL, or assembly language programs. You can input the time and date in any of three ASCII string formats: (1) AM/PM, (2) 24 hour, (3) Mountain Hardware's Apple Clock format, or as integer or real values. Here's an APPLESOFT program that reads and prints the time in all four formats from a THUNDERCLOCK PLUS in slot 3.

And the THUNDERCLOCK PLUS provides interrupts which can be enabled or disabled under software control. You can select any of three interrupt rates: 64, 256, or 2048 interrupts/second. Using interrupts, you can time events or measure intervals with a resolution of 1/2048th of a second (488 microseconds).

THE PLUS

The THUNDERCLOCK PLUS BSR/X-10 ultrasonic interface allows your programs to transmit control signals to your BSR/X-10 Command Console. The Command Console then impresses these control signals on the already existing 110V AC wiring to remotely control lights, appliances, or almost any electrical device you plug into a BSR/X-10 Remote Module. The THUNDERCLOCK PLUS BSR/X-10 allows your APPLE II to transmit all 16 remote module unit numbers and all 6 commands: ON, OFF, BRIGHT, DIM, ALL LIGHTS ON, and ALL OFF. You can specify the duration of the command, giving you full DIM/BRIGHT control — 128 dim/bright levels, not just 3 or 4. The THUNDERCLOCK PLUS 1K onboard firmware makes sending BSR/X-10 commands easy, too. Just a simple BASIC "PRINT" statement does it! The BSR-X10 system is widely available through SEAR'S as their HOME CONTROL SYSTEM.

THE THUNDERWARE SCHEDULER

The THUNDERWARE SCHEDULER software ties these features together so you can create schedules to control lights, appliances, security systems, or almost any other electrical device you plug into a BSR/X-10 remote module. The software includes:

SCUTIL — The scheduler utility that lets you make or change a schedule. You can schedule events to occur on daily, weekly, or monthly cycles, or on specific dates, at specific times or randomly over an interval of time. Call up or save schedules on disk. Print schedules on your printer.

SCHED—Executes your schedules in real-time using the THUNDERCLOCK. SCHED runs in the "background" so you can run other programs in the "foreground". And if there's a power-failure, the scheduler can re-initialize itself when power returns, restoring things to scheduler control. Perfect for automated control of AC Power in your home, business or laboratory — energy management, display lightings, security, and more!

The THUNDERCLOCK PLUS gives you all these features on one peripheral card, saving power and valuable slot space. Designed to meet all of APPLE'S high standards, the THUNDERCLOCK PLUS is completely compatible with APPLE II hardware and software. The THUNDERCLOCK PLUS is the first peripheral to tie all these features into one package — at a price that makes time and BSR/X-10 control affordable for your APPLE II. Shop around and compare features, quality, and price — and you'll see why the THUNDERCLOCK PLUS is ahead of its time!

THUNDERCLOCK PLUS TECHNICAL SPECIFICATIONS
Real-time clock/calendar and BSR/X-10 ultrasonic transducer interface. Resides in any APPLE II Slot 1 through 7.
Printed circuit board: FR4 glass epoxy, solder masked on both sides, silk screened legend. Board dimensions: 2.75 x 6.30 inches (excluding contact fingers). Gold plated edge connectors: 30 micro-inch 99% gold over 75 micro-inch low-stress nickel.
Environmental operating range: 0° to 55°C, 0 to 90% humidity (non-condensing). Generous power supply decoupling.
Clock/calendar set enable/disable switch assures time base integrity. No danger of accidentally clobbering the clock/calendar.
On-board 1K EPROM contains all firmware needed for easy reading and setting of clock/calendar, interrupt selection, and transmission of BSR/X-10 ultrasonic commands.
On-board batteries keep clock/calendar running when AC power is off. Uses 2 readily available 1.5V alkaline "N" cells. Battery current draw typically less than 10 micro-amps. Typical battery life of 3 to 4 years.
Calibrated quartz crystal controlled time base with typical accuracy of ±0.001%.
Crystal controlled ultrasonic transducer with cable for BSR/X-10 Command Console interface.
Fully assembled/calibrated/burned-in and tested. Warrantee for one year.

TITLE: TYPEWRITER INTERFACE
PUBLISHED BY: ROCHESTER DATA

Turn your electric typewriter into a low cost, high quality hard copy printer. 1 Year Warranty.
Dynatyper — the patented* RDI—I/O Pak is fast becoming the industry standard for typewriter output. Why? Because:
1) It takes 2 minutes to initially install and 5 seconds to remove or replace.
2) You do not have to modify your typewriter. All factory warranties and maintenance agreements on your typewriter will be honored.
3) You can use it with all powered carriage return typewriters that have U.S. keyboard. Our Model I works with all non Selectrics and our Model II works with Selectrics. Conversion between models takes 2 minutes and the kit (26 plungers) is available for a nominal charge.
4) You don't have to lug around a bulky printer when you travel. If there is a typewriter at your destination, you can install the light (3 lbs.) I/O Pak in just 2 minutes.
5) Same interface for TRS-80, Apple and GPIB. Centronics and Pet compatible interfaces are available in third quarter 1980. Electric pencil available.
6) Delivery: Stock to two weeks.
PRICE: $499

TITLE: UPPER/LOWER CASE ADAPTER
PUBLISHED BY: PAYMAR

Extends the keyboard and display of your Apple II to provide both upper and lower case letters. You've seen programs which can "generate" lower case by the use of Hi-Res graphics, but that is a slow and awkward technique, and normally can't produce letters with below-the-line decenders. This special circuit board does just that, and efficiently too. Great for word processing applications in conjunction with an upper/lower case printing device. The adapter is a "dual socket" piggy back board that plugs into the standard character generator ROM socket under the keyboard. Works with word processors such as WRITE-ON! and Programma International's WORD PROCESSOR.

PRICE: $64.95

TITLE: 80X24 VIDEOTERM
PUBLISHED BY: VIDEX

80 columns by 24 lines with easy to read 7x9 dot matrix, upper and lower case with descenders using shift lock feature • 1K firmware incorporates PACAL and BASIC protocalls so user is not required to enter machine language programs or change PASCALS, Misc. info. or Gotoxy files • Compatible with all APPLE II peripherals so user won't need new software patches for future software products • Crystal controlled dot clock for excellent character stability • VIDEOTERM is the same size as the Apple language card and power consumption is held to a minimum through the use of CMOS and lower power devices • Character set can be user definable up to a maximum of 128 symbols of 8x16 dot matrix font • Display control character mode and four standard display formats controlled by escape sequences • Built in light pen capability • Inverse display mode • 50/60 HZ operation • Sockets on all IC's.

PRICE: $345

TITLE: WIRE WRAP BOARD
PUBLISHED BY: CALIFORNIA COMPUTER CO.

The 7500A is used for the prototyping or building of unique circuits for the Apple II™ computer.
All bus signals labeled on board
Perimeter ground
Size: 7 inch long x 2.75 inch high
All holes plated thru
Gold plated connector fingers

TITLE: VIDEOSTIK
PUBLISHED BY: COMPUTER PLUS

This joystick adds exciement to games. High quality, long-life components; rugged, heavy-duty plastic case. No hardware modification necessary, plugs into existing paddle interface. Equipped with one pushbutton.

PRICE: $39.95

TITLE: Z-80 SOFTCARD
PUBLISHED BY: MICROSOFT

Plug the Microsoft Z-80™ into your Apple II and suddenly you've got more software versatility than has ever been available for any personal computer! With the Z-80 Softcard, you can take advantage of the variety of languages and the multitude of applications written for Z-80 based computers that you could never before buy for the Apple II.

When you start with a computer as exciting and distinctive as the Apple II, then add thousands of new software packages for it, you'll end up with a system that can't be beat for either practicality or pure pleasure by any personal computer available today.

The CP/M® operating system and Microsoft Disk BASIC interpreter are included in the Z-80 Softcard package, ready to load from diskette and run on your Apple II. And you'll be able to add other Microsoft languages - FORTRAN, COBOL, and BASIC COMPILER. - as version for the Apple are introduced in the next few months.

The Z-80 Softcard is your key to future software expansion. It brings the largest single group of microcomputer software - software for Z-80-based processor when desired, the Z-80 Softcard makes conversion of software for any Z-80 based computer to the Apple surprisingly simple.

You don't lose your Apple when you gain the Z-80. The Z-80 Softcard is a plug in card for the Apple II that actually contains a Z-80 processor. It allows you to use either the Apple's 6502 processor or the added Z-80 processor as needed to run a particular program. Switching between the two processors is as easy as typing in a command.

All the features you love about your Apple stay intact. And the Z-80 Softcard may be used with either the Apple II or Apple II Plus. It supports the Apple language card and all Apple peripherals.

MICROSOFT DISK BASIC

Microsoft BASIC, included in the Z-80 Softcard package, brings more power to BASIC programming. It has all the microsoft BASIC features not found in Applesoft plus exclusive new features added to take advantage of the Apple II's special capabilities.

PRINT USING for formatted output. Includes asterisk fill, floating dollar sign, scientific notation, trailing sign, comma insertion.

Long variable names. Variables may have up to 40 characters and may contain embedded reserved words.

Random Disk I/O with variable length records.

WHILE/WEND Statement. A new conditional statement that give BASIC a more structured flavor. Executes a series of statements in a loop as long as a given condition is true.

16-digit precision. Compared to 9-digit precision with Applesoft.

Enhanced graphics. Disk BASIC supports all the graphics capabilities of Applesoft and adds the graphics statements LINE, PUT and GET.

Supports sound.

AUTO and RENUM. AUTO generates the numbers automatically and RENUM allows you to renumber lines.

Edit mode subcommands. A full range of editing commands lets you edit individual lines easily and efficiently.

CALL statement. Lets you call an assembly language or FORTRAN subroutine.

CHAIN and COMMON. Allow you to call another program and pass variables to it.

CP/M OPERATING SYSTEM

By far the most widely used microcomputer operating system, Digital Research's CP/M has become a defacto standard as has Microsoft BASIC among microcomputer BASICs. Many languages and applications require the presence of CP/M to operate but until now it was available for Z-80 system only. The Z-80 Softcard allows the versatile and powerful operating system to run on the Apple II. And because CP/M® is included with the Softcard, it is a simple matter to convert standard CP/M™ applications packages to run on the Apple II.

QUESTIONS?

How long will it take to install the Z-80 Softcard?

Just a few minutes. The card simply plugs into any of the peripheral slots except slot 0 inside the Apple II. There are no chips to remove or jumpers to add.

Will it work with my model of Apple II?

Yes. The Z-80 Softcard works with all configurations of the Apple II from the standard Apple II to the Apple II Plus with language card.

Can I still use my Apple software after I install the Z-80 Softcard?

Yes. Your ability to run Applesoftware is in no way affected. The Z-80 Softcard is like any of your Apple peripherals. You turn it on only when you want to use it. When the card is off, your Apple functions as usual.
Can I run any CP/M® software with the Softcard?
Yes, if the software is written for standard CP/M® .
What languages will be available for the Apple with the Z-80?
Microsoft's powerful ANSI-standard BASIC interpreter is included in the Z-80 Softcard package. BASIC Compiler, FORTRAN and COBOL will become available for the Apple in the summer of 1980.
Is the BASIC included in the package the same as Applesoft?
No. Applesoft is a version of Microsoft's famous 8K standard BASIC, written over 3½ years ago. The BASIC included with the Z-80 is the latest version of Disk BASIC with many additional enhancements to take advantage of Apple's unique capabilities.
Does the Z-80 Softcard support printers?
Yes, printers are supported through the standard Apple printer card.
What is the minimum machine configuration required to use Z-80 Softcard?
The Softcard with BASIC and CP/M® will run on a 48K system with one disk drive.
Will I still be able to write 6502 assembly language programs?
Yes. Your ability to use the 6502 processor is in no way affected when the Z-80 Softcard is installed.
Z-80 Softcard will be available May 30, 1980.
THE Z-80 SOFTCARD PACKAGE
Microsoft's Z-80 Softcard Package consists of the plug-in Z-80 microprocessor card, two diskettes containing Microsoft's Disk BASIC interpreter and the CP/M® operating system from Digital Research, plus complete instructions and reference documentation.
SYSTEM REQUIREMENTS
The Z-80 Softcard requires an Apple II System with 48K RAM and one disk drive.

TITLE: OMNI BLITZ BUG
PUBLISHED BY: OMNI COMMUNICATIONS COMPANY, INC.
Blitz Bug Lightning & Transient Voltage Suppressor
PRICE: $24.95

TITLE: PADDLE PLUS
PUBLISHED BY: SOFTAPE
If you have the same problem as Arnold Zieback with constantly changing paddles and Pens, then you too need Paddle Plus. This extender plugs into your game I/O port and is conveniently secured for easy access.
PRICE $14.95

TITLE: THE UNIVERSAL PARALLEL CARD
PUBLISHED BY: PERIPHERALS UNLIMITED INC.
The Universal Parallel Card represents a new concept in intelligent peripheral design for the Apple II Computer. It offers the user more flexibility in input/output control than has been possible in the past, due to the ability to change the configuration of the I/O drivers to meet his particular needs. This is possible through the use of a user programmable driver on the interface card with a battery backup system to keep the driver "alive" while the Apple is turned off. The battery system will maintain the driver for up to 4 years with the power off.

Features of the Universal parallel card: Two 8 bit bi-directional I/O ports with full hand-shaking capabilities and optional latching on all inputs, two 16 bit programmable interval timers, 8 bit serial shift register, full interrupt capabilities with switchable IRQ or NMI operation, 256 byte I/O driver memory area using low power CMOS RAM with battery backup and write protect circuitry. The Universal Parallel Card is provided with the following applications driver software: Standard Printer Driver - emulates Apple's Parallel Card, Page Formatter — Automatically formats printed material with user definable top, bottom, and left hand margins as well as page length, Remote Keyboard Driver -Allows use of an external ASCII keyboard for input, General Purpose I/O Program - Configures the card as one 8 bit Input port and one 8 bit Output port with user definable handshaking. All of these software modules come complete with source code listings and application documentation. These modules are provided on cassette tape and can be loaded into the I/O driver memory from either disc or tape. All software is fully compatible with existing Apple Peripherals and the Disc Operating System. Full Documentation of the hardware is provided including schematics and the manufacturers reference information on the 6522 VIA chip used on the card. Also, a "roll your own" driver guide is included for those who wish to implement specialized applications.
PRICE: $179.95

TITLE: PARALLEL INTERFACE
PUBLISHED BY: CALIFORNIA COMPUTER SYSTEMS
Two bi-directional 8 bit buses for interface to peripherals
Two programmable control registers
Two programmable data direction registers
Four individual controlled interrupt input lines; two useable as peripheral control outputs
Handshake control logic for input and output peripheral operation
HIgh impedence 3 state and direct transistor dirve peripheral lines
Programmable interrupts
CMOS drive capability on side A peripheral lines
2 TTL drive capability on all A and B side buffers
Power down ROM
Supports interrupt daisy chain
Allows DMA daisy chain
256 bytes firmware (ROM) or software (RAM) space available

TITLE: APPLE II PARALLEL INTERFACE
PUBLISHED BY: MICROPRODUCTS
The Microproducts Parallel Interface card allows your Apple II computer to communicate with the outside world. Applications include: Printer Interface, Power controller, Tone generator, Music generator, Plotter Driver, Led/Lamp Driver. Features: 8 bit output, 15 ma output, current sink or source, TTL or CMOS compatible, will go in any slot on the Apple II, Data available strobe.
Data can be transferred to an external device by a STA, STY, or STX from assembly language, or a POKE from BASIC. The 8 bits output can drive 27-segment LED displays, relays, SCR's, Printer, or anything which requires up to 8 bits of data.
PRICE: $44.95 - General purpose 8 bit parallel output port card.
$49.95 - Southwest technical Products PR-40 and Centronics 779 Printer Interface.

TITLE: PARALLEL PRINTER INTERFACE CARD AND CENTRONICS PRINTER INTERFACE CARD
PUBLISHED BY: APPLE COMPUTERS INC.

These Printer Interface Cards give you the capability to generate reports, listings, labels, and letters with your Apple computer, using a variety of parallel-interfaced printers. A special version of the card, the Centronics Interface Card, is available for use specifically with the Centronics 779 printer.
Both the Parallel Printer Interface Card and the Centronics Interface Card ... allow you to generate printed material on a variety of popular printers ... eliminate the need to write or load assembly language programs to control attached printers, because of built-in intelligence ... allow simple printer control from BASIC or Pascal ... permit format flexibility by handling print formats up to 255 characters per line ... allow printer speed felxibility, because both can accommodate printing of up to 5000 characters per second (3700 LPM at 80 characters per line).
Parameter Description:
Data and Control:
Signals: 7-8 parallel data bits
Print Line Width: 40-255 char/line. Automated formatting of BASIC listings.
With your Parallel Printer Interface Card order, you will receive: Parallel Printer Interface Card; Ribbon cable with no connector on one end; Configuration jumper block; Instruction manual.
With your Centronics Interface Card order you will receive: Centronics Interface Card; Pre-wired configuration jumper block; Ribbon cable with Centronics connector; Instruction manual.

TITLE: PARALLEL OUTPUT PORT CARD
PUBLISHED BY: CALIFORNIA COMPUTER SYSTEMS

With our APPLE II Parallel Port Card you can interface a parallel printer to your APPLE. Microproducts can supply the completely assembled printer interface for the Centronic 779, SWTP PR -40, Anadex or OKIDATA printers including Parallel Output Port Card, appropriate printer connector installed on ribbon cable and printer driver software on cassette or the Interface Brain.
The Parallel Output Port Card, Parallel Printer Interface and the Interface Brain, which contains the above printer driver routines and the EPROM Programmer driver routine, may be purchased separately.
FEATURES:
8 bits output
15 ma output current sink or source
TTL or CMOS COMPATABILITY
Will go in any Apple II slot
Data available strobe
SPECIFICATIONS:
Interface hardware consists of:
An epoxy fiberglass PC board
Double sided
Plated through holes
Solder mask
Silk screen printed legends
Gold plated edge card connector
APPLICATIONS:
Power controller
Tone/Music generator

Plotter drive
LED/Lamp driver
Printer interface
PRICE: 39.95

TITLE: POWERMASTER
PUBLISHED BY: RAINBOW COMPUTING

Does your computer have problems with intermittent power, VOLTAGE FLUCTUATIONS, OR SPIKES? Do you require uninterruptable power for a critical application? Would you like to run your computer in a car, van, boat, or at a remote site that has no AC power? Are you overseas or planning to go to another country where unreliable power or non-U.S. TV signals and power keep you from running your system?

Well now your problems are over. Simply plug POWERMASTER into the Apple II motherboard and connect it to any 12 volt automobile battery using the cigarette lighter adapter or the clips provided. POWERMASTER is a complete, remote power system which supplies all needed voltages with enough reserve capacity to run your computer with all peripheral slots full (including a floppy disk controller) for many hours. Does NOT use the Apple power supply. With the addition of an AC/DC TV you have a complete, stand alone computer system that will run ANYWHERE!

Charging or recharging the battery may be done using a standard trickle charger, auto alternator, or solar panels. If you do not already own an Apple II personal comptuer, Rainbow Computing offers a complete stand alone computer and TV system using POWERMASTER.

PRICE: $495.00

TITLE: PRINTER INTERFACE
PUBLISHED BY: MICROPRODUCTS

Ideal for writing programs, as you have complete permanent record of all changes and deletions to your program.

You can refer to an earlier part of your program without the necessity of relisting it on the screen.

Can be incorporated to boot with disk.

When using assembly language mode, one line at a time will be printed in the same format as the video screen.

While in BASIC, using the list mode, printer will list the entire program without stopping as the screen scrolls up one line at a time.

Printer can be called from BASIC to print entire contents of video screen.

PRICE: 49.95

TITLE: PROGRAMMER'S AID #1 ROM
PUBLISHED BY: APPLE COMPUTERS
MEMORY: 2K

Programmer's Aid #1 is a ROM-based library of routines to simplify and enhance your Integer BASIC programs. Its capabilities include:

High-Resolution Graphics Generation
Program Renumbering and Linking
Tape Verification
Musical Tone Generation (12 timbres and 5 octaves)
RAM Testing
Machine Language Program Relocation

Programmer's Aid #1 is packaged as a single 2K-byte ROM to be inserted in a

socket of the APPLE II. The routines upon which it is based are completely documented in the manual which accompanies the package.
PRICE: DISK, 50.00

TITLE: PROM MODULE
PUBLISHED BY: CALIFORNIA COMPUTER SYSTEMS
Permits the addition or replacement of the Apple II™ firmware without the physical removal of the Apple II™ ROMS. This allows softwre/firmware replacement, change, and/or patch to be made on a ROM or BYTE BASIS. An on-board enable/disable toggle switch is also available.
BYTE oriented program overlay
Selectable prom overlay
Power down PROMS
14K PROM space available
Uses +5 volt 2716 type proms
Allows use of DMA/interrupt daisy chains

TITLE: ROM PLUS
PUBLISHED BY: MH
NEW EXPANDABILITY.
ROMPLUS + is a peripheral board whose added features can turn the Apple Computer into the most powerful personal computer available today.
NEW POWER.
ROMPLUS + provides six sockets to accept individually addressable 2K ROM's or EPROM's. Keyboard Filter a 2K ROM program, comes installed on the ROMPLUS + board and adds many useful features to your Apple, including:
Upper and lower case letters. The only system that offers keyboard input and standard shift key operation.
Multiple user-defined character sets.
Colored or inverse-colored letters.
Keyboard macros - two key-stroke, automatic typing of multiple, user-defined words or phrases. Including BASIC and DOS commands.
Mixed text and graphics.
Improved cursor control.
STOP LIST and END LIST.
Works with Integer BASIC, RAM, or ROM Applesoft, and DOS.
And more ... quick to learn. Easy to use.
Software support provided on disk includes demonstration programs and two Editors that allow you to define your own characters or keyboard macros.
SOPHISTICATED FIRMWARE.
In addition to the Keyboard Filter ROM, ROMPLUS + offers five sockets for ROM or EPROM, plus "scratch-pad" RAM. And, sophisticated firmware on ROMPLUS + allows one, two or more of its chips to be used simultaneously for programs longer than 2K.
EXPANDED UTILITY.
Many software programs really ought to be utilized as firmware. ROMPLUS + makes that an actuality for the Apple by providing six additional ROM sockets.
AT YOUR DEALER NOW.
Complete and tested. Including the powerful Keyboard Filter ROM and full documentation. Ask your dealer for a demonstration.
PRICE: WITH KEYBOARD FILTER 200.00
WITHOUT KEYBOARD FILTER 180.00

TITLE: PROGRAMMABLE TIMER MODULE
PUBLISHED BY: CCS

Flexible external interface patch area for custom interface applications.
Selectable prescaler on timer 3 capable of 4mhz input.
Programmable interrupts.
Readable down counter indicates counts to go to time-out.
Selectable gating for frequency or pulse width comparison.
Three asynchronous external clock and gate/trigger inputs internally synchronized.
Three maskable outputs to patch are
Power down ROM
Supports interrupt daisy chain
Allows DMA daisy chain
256 byte firmware (ROM) of software (RAM) space available.

TITLE: SERIAL INTERFACE CARD
PUBLISHED BY: APPLE COMPUTERS INC.

The Serial Interface Card allows an Apple computer to exchange data with other computers, printers, and accessories in serial format (one bit at a time). It is intended for applications that use data rates other than those handled by the Communications Interface Card (110 or 300 baud), or that involve serial printers that don't require "handshake".
The Serial Card features on-board firmware that provides BASIC control in both block-data-transfer and printer-operation modes. A number of hardware and software switches on the card serve to adapt it to a wide variety of applications, yet it remains simple to use because of its built-in intelligence.
The Serial Interface Card ... expands your system's usefulness by providing an industry standard (RS-232) interface to most computer accessories ... eliminates the need to write or load assembly language control programs to control high speed printers and plotters, because of its built-in intelligence ... is easily controlled from BASIC or Pascal using simple commands ... provides access to a variety of local and remote computer equipment because it quickly transfers large blocks of data by telephone (through a modem), or directly, at speeds from 75-19K baud ... offers easy set-up through switch-selectable preset conditions for speed, line length, auto line feed, and carriage return delay.
Parameter Description:
Signal Level: EIA RS-232C or 20mA current loop
Data Word Format: 1 start bit, 1 or 2 stop bits, 5-8 data bits; odd, even, or no parity. Checksum is optional.
Character Handling Options: Lower-case characters optionally converted to upper-case or passed through unmodified and displayed in inverse video.
With your Serial Interface Card order, you will receive: Serial Interface Card; DB-25 bulkhead connector and mounting bracket; Instruction Manual; Letter-quality printer control PROM.

TITLE: SYNCHRONOUS SERIAL INTERFACE
PUBLISHED BY: CCS

Conforms to RS-232C (configuration A thru E)
Supports half or full duplex operation
DTE type configuration
Failsafe RS-232C operation
14 STD CLK rates
50-19.2 BAUD plus EX CLK
BAUD rates dip switch selectable
All BAUD rates crystal controlled
Programmable interrupts from transmitter, receiver and error detection logic
Character SYNCH by one or two SYNC codes
Programmable SYNC code register

Standard synchronous signaling rate per RS-269/ANSI X3.1-1976
Peripheral/modem control functions
Three bytes of FIFO buffering on both transmit and receive data
7, 8, or 9 bit transmission
Optional odd, even, or no parity bit
Parity, overrun, and overflow status checks
Power down PROM
256 bytes firmware (ROM) or software (RAM) space available
Supports interrupt daisy chain
Allows DMA daisy chain

TITLE: SPEECHLAB
PUBLISHED BY: HEURISTICS

FEATURES
Recognize 32 to 250 words or phrases of your choice for any S100 computer.
Link more than one set of words to provide essentially unlimited vocabulary.
Programs callable from BASIC (and other high level languages)
Requires 4K RAM for each 32 word vocabulary.
Recognition software in on-board ROM (20-S only)
Complete with microphone, manual and 1-year warranty.
APPLICATIONS FOR SPEECHLAB
Typical applications for SpeechLab include voice control games, package sorting, inventory entry, air traffic control, data retrieval, data entry, cartography, computer aided troubleshooting, airline reservations, programming and speech recognition research.
ADVANTAGES OF SPEECH DATA ENTRY
Speech entry is natural in any language. Speech is the most convenient communications channel for all of us. Two or three hours of training will make you an expert in voice computer entry.
Speech is a human's highest capacity output channel. You can use it in the dark, around corners and without contact. You can use it in conjunction with other data entry for high throughput.
You can use speech on the move. It's compatible with telephones and voice communication networks. Speech is unaffected by weightlessness. Use it in a clean room environment.
Use it anywhere light weight, completely portable computer entry is required.
TWO S100 MODELS
Speechlab now comes to you in two models, the Model 20-S with a vocabulary of 32, 64 and 250 words and the Model 50 with a vocabulary of 64 words.
MODEL 20-S
Features include ROM based software with a relocatable program designed to run on 2 MHz Z-80 systems so you can load it anywhere you have memory. After loading, the 2K ROM can be disabled under computer control. The speech recognition program, callable from any BASIC, requires 4K bytes of user supplied RAM for 32 words. This RAM can be located anywhere in the address space.
Hardware includes 2 band pass filters with 2 bits of amplitude, 2 zero crossing detectors and a linear amplifier. 5¼" Northstar diskette also available. Microphone and user guide included.
Memory requirements:
20S - 32 - 4K
20S - 64 - 7K
20S - 250 - 19K
MODEL 50
Model 50 is an S100 bus compatible system (8080 or Z-80) capable of handling a 64 word vocabulary using 64 bytes of storage per spoken word. Features include

CMOS design for reliability and low power consumption. Response is real time. SpeechLab features functional signal processing modules that can be reconfigured under software control for maximum freedom. Filter skirt rolloff is 80dB per decade. SpeechLab carries an on board signal generator, for prompting and built-in test, previously found only in the most expensive equipment. Typical power consumption is 1 watt. For ease of use there is a single on board input/output port.

Hardware included 3 band pass filters (6 bits amplitude), 1 zero crossing detector, a linear amplifier, compression amplifier, 6 bit A/D converter and a beeper. The raw waveform is available for advanced experiments.

The Model 50 comes to you with a complete hardware manual, 95 pages long. It covers general information and theory of the hardware.

LAB MANUAL

Even more important than the hardware manual is the 275 page SpeechLab laboratory manual. Here is the only introductory volume on speech recognition currently available anywhere. The SpeechLab manual includes an introduction, a section on the mechanisms of speech and 35 graded experiments using programs written in SpeechBasic. There are over 100 tables and graphs. A description of the progams including source code is part of the package. A seven page bibliography will guide you in further study. *Model 50* lab manuals are available separately. They are excellent introductory texts on speech and pattern recognition.

SOFTWARE

Software for Model 50 SpeechLab includes complete programs offered on 8" CP/M diskette soft sectored IBM compatible. Included are: SpeechBasic programming language, Assembly language speech recognition program, and hardware self test program. Source listings are provided in SpeechBasic to plot and correlate speech data. Two recognition programs are offered to clarify speech concepts.

The Assembly language progam uses less than 4K bytes for a 32 word vocabulary. It loads at 100H. The Speech Basic BASIC interpreter loads at 0 and requires 8K of memory. A diagnostic program is included. 5¼" Northstar(TM) diskette also available.

A noise cancelling microphone is offered for both the Model 20 and the Model 50.

STORING VOCABULARIES

Once the Unit is programmed, the samples of speech (in a digital representation) may be stored elsewhere in RAM or on disk for later retrieval. This makes practical applications in which vocabularies larger than 64 words are required. The training samples for a different words set can be brought into RAM memory when the required vocabulary changes (such as when shifting from a "menu selection" program to the selected application program).

ACCESSORIES

Noise Cancelling Microphone Recommended for commercial applications to reduce effect of background noise. Head mounted to free the hands, with 6 ft. cord.

Extension Cable & Switch for extended range, this 15 ft. extension cable equipped with "cough" switch.

OTHER PRODUCTS

Model 20A, 32 word recognizer for Apple II

Model H-2000, 64 word recognizer for the Apple II

Model 7000 Industrial Voice Controller

TITLE: SPEECHLINK
PUBLISHED BY: HEURISTICS

FEATURES

Recognize 64 words or phrases of your choice on the Apple computer.
Link more than one set of 64 words to provide essentially unlimited vocabulary.
Write your programs in BASIC (no assembly language coding required).
Use it with Applesoft Floating Point BASIC or Integer BASIC (Extendable to Pascal).
Requires only 4K RAM to recognize 64 words or phrases.
Run under Disk Operating System or Cassette Tape System.
Small pre-trained vocabulary facilitates system use.
Complete with microphone, manual, demonstration software, and one year warranty.

GENERAL

The SpeechLink Model H2000 is a practical low-cost speech recognition peripheral for the Apple computer that allows you actually to talk to your Apple — to enter data.
to control programs and the disk.
to control other equipment attached to the Apple.
The H2000 substitutes your voice for the keyboard. It enables you to think and control your computer at the same time, concentrating on the action — the video display, printer output, external action under computer control, or other important material — rather than concentrating on the keyboard. (You're not unusual if you can't type and think at the same time.) With the H2000 you can operate your Apple while your hands and your eyes are busy writing — or drawing — or ...
In short, the Model H2000 SpeechLink improves your productivity, enhances the utility of your Apple, and makes the whole process of controlling your computer system both easier and more enjoyable.
The unit is suitable for light-duty commercial application, for laboratory use, and of course for home and hobby use.

APPLICATION

Attach an H2000 (or the Integer BASIC version, Model 20A) to an Apple and you have hundreds of new potential applications literally at the tip of your tongue. Consider these:
Control graphic display equipment.
Control Production Test Equipment attached to the Apple. (Say "NEXT TEST")
Teach your children — identify shapes (say "triangle"), colors (say "red"), relative size (say "bigger") before the kids can spell — or even read.
Record measurements taken in pathology exam.
Enter mixed data into your computer such as 123 feet, 7 inches or 12 pounds 10 ounces or 5 Fords.
Record "yes" and "no" and other responses over the telephone.
Record data on a tape recorder, then enter it in your Apple using SpeechLink.
Enter data into your financial programs, saying "200 shares XYZ Corp. at $346.37."
Take inventory on your computer, saying "ten pieces Part Number A-74632," or "seven sheep, 3 cows ...".
Control model trains and ships through your computer by voice (say "stop," "forward," "slow"...).
Collect ecological data direct on your Apple ("visibility 6 miles, light haze...").
Enter surveying coordinate information in natural units.
Write a simple program to call programs off you disk by name under voice control.
Anything you can do on the keyboard with ten keystrokes you can do with a simple single voice command in a fraction of the time without interrupting your train of thought.

THE H2000 SPEECHLINK

The H2000 SpeechLink is a hardware-software subsystem that consists of a single peripheral plug-in card (and associated microphone) that plugs into any one of the seven I/O slots on an Apple computer.

The H2000 recognizes up to 64 words or phrases (or multiples thereof) that you choose and program the unit to recognize. The meaning of these words or phrases is completely controlled by you in an applications program written entirely in BASIC (either Applesoft or Integer BASIC) or optionally in Pascal. Only BASIC statements are required to cause the Apple to listen and recognize what you say. The software to perform the actual recognition of what you say and to link those sounds and words to BASIC is contained in micro-code located in a ROM mounted on the PC Board.

Technically speaking, the unit is a speaker-programmed, isolated word recognition system. The user must, prior to expecting the unit to recognize his words, program — or train — the unit to his voice by speaking one to three samples of each word in the vocabulary (you don't have to use 64 words if fewer will do). This programming process is again executed in ROM micro-code and controlled by you with BASIC statements.

Once the unit is programmed, the samples of speech (in a digital representation) may be stored on disk for later retrieval. This eliminates the need to program the unit each time you use it and also makes practical applications in which vocabularies larger than 64 words are required. The training samples for a different word set can be brought into RAM memory in place of this previous set when the required vocabulary changes (such as when shifting from a "menu selection" program to the selected application program). With the H2000 also, more than one 64-word working set may be resident in Apple RAM memory at one time if desired.

Now in recognition mode, each word or phrase spoken must begin and end with at least 0.1 second of silence.

HOW IT WORKS

The Model H2000 recognizes the words or phrases you say by comparing the pattern and features of the word you want recognized to a table of patterns and features of the words in the vocabulary; then it picks out the closest allowable match. The table of features is constructed from the speech samples of words you give the unit during the programming process. Each word or phrase up to a 1.5 seconds long is represented by a table entry 32 bytes long.

The model H2000 (and the Integer BASIC version Model 20A) separates the speech waveform into two frequency bands. Spectral analysis is performed on each band and selected information entered into the table. A word "begins" when there has been 100 ms of "continuous speech" and ends when there has been 100 ms of "continuous silence."

After the end of a word, the word is "recognized" when the number representing the "difference" between one of the given patterns stored in the table and the pattern of the unknown utterance is the smallest of all possible matches, and less than some minimum fixed value. In the H2000 this rejection value can be adjusted by you to tailor the performance of the equipment to your needs (the number is fixed in the integer BASIC Model 20A).

REQUIREMENTS

The Model H2000 (and the Model 20A for Integer BASIC) will operate in any Apple with at least 4K bytes of available RAM. A minimum of 4K bytes of RAM are required for each unit; the H2000 achieves a 64 word vocabulary in this space, the Model 20A a 32 word vocabulary. One I/O "slot" numbered 1-7 is required for the H2000 (or the 20A).

The unit will operate under either disk or cassette tape operating systems; the user programming varies slightly according to requirements set down by Apple.

ACCESSORIES

Noise Cancelling Microphone
Recommended for commercial applications, this unit reduces background noise and accepts directional speach input preferentially. Head mounted to free the hands, with 6 ft. cord. Order Part No. M0002 for direct input to the H2000 or Model 20A.
Extension Cable & Switch
For extended range, this 20 ft. extension cable equipped with push-to-talk switch will allow you to roam far afield from your Apple. Order Part No. C0021.
Diskette Software
Demonstration software on diskette for easier handling, the same as that shipped with each unit on cassette. Order Part No. S2013.
TECHNICAL SPECIFICATIONS
General
Function - Word or Phrase Recognition for Data Input and Control.
Type - Isolated-word, Speaker-programmed, Each Word or Phrase up to 1.25 seconds long.
Vocabulary Size - 64 words or phrases per working set (32 words for Model 20A).
Equipment Required - Apple II Computer with 4K available memory. (May be used in conjunction with other peripherals).
User Programming - BASIC (Pascal optional).
Method of Connection - Plug-in Card for Apple I/O Slots.
Memory Requirements - 4096 bytes RAM for 64 word vocabulary (32 words in case of Model 20A).
Compatibility - Applesoft with or without DOS Integer BASIC with or without DOS (Model 20A Integer BASIC only).
INPUTS
Power - +5, —12VDC from Apple peripheral bus.
Logic Signals - Apple peripheral bus.
Voice - Microphone, hand-held (included). Connects to H2000 plug-in card. (Noise-cancelling mic optional).
OTHER
Demonstration software for either disk or tape operating systems provided on cassette.
PHYSICAL SPECIFICATIONS
Card Size - 8" L x 3-1/16" H x 3/4" D (Compatible with Apple I/O Slot requirements).
Microphone - Hand Held, Cable Length 4 ft.
Temperature - +32°F to +100°F Operating. -40°F to -160°F Storage.
Humidity - 0-95%, non-condensing.
Shipping Weight - 2 lbs. (1 kg.).
The Model 2000 (and Model 20A) comes completely assembled and tested. A user manual and demonstration programs on cassette are included with the unit.
Warranty is one year from date of purchase, improper use excepted.

TITLE: SOLDER BOARD
PUBLISHED BY: CALIFORNIA COMPUTER SYSTEMS

it is designed for soldering of circuits.

TITLE: STAND ALONE BADGE CARD READERS
PUBLISHED BY: COMPUTER STATIONS, INC.

This compact, lightweight unit (approx. 8 1/2" x 9" x 4") is designed to read all standard Hollerith punched badges (or cards). All output is RS232C compatible for use with any new or existing computer system. Convenient data collection; e.g. job costing, time keeping, inventory control, security, etc. Standard model

reads 10 columns, special order to 20 columns. Delivery 150 days ARO, minimum quantity 50.
PRICE: $995.00

TITLE: EXATRON STRINGY FLOPPY (MASS STORAGE SUBSYSTEM)
PUBLISHED BY: EXATRON, INC.

Finally an alternative to disks; low cost, reliability, speed. Information packages available now for: APPLE, PET, TRS-80, OSI, KIM/SYM/AIM, S-100, FS-232, STD-BUS, OEM.
Call our hot line today, 800-538-8559, to request an information package.

TITLE: SUP'R'MOD II
PUBLISHED BY: M&R ENTERPRISES

The Sup'R'Mod II is a wide band Black and White or Color compatible interface system intended to convert the Home TV to a Full Video display for home computers, CCIV camers and similar systems which output NISC compatible composite Video. The Sup'R'Mod is pretuned to U.S. Channel 33 (uhf), includes a coaxial cable and antenna transformer, and in conjunction with a standard home TV set, insures safe isolation and high performance. Plugs directly into the Apple II without additional wiring and soldering.
PRICE: $29.95

TITLE: SUPERCHIP
PUBLISHED BY: ECLECTIC RENTALS INC.

SUPERCHIP is a 16K BIT ROM designed to be plugged into the Apple II Computer. SUPERCHIP provides an alternative, more powerful set of input/output service routines. The new output routine can display, within the window concept, the full ASCII character set (lowercase included), along with 32 new characters. User defined characters and character sets are also supported. Text is available in reverse video and may be freely mixed with high resolution graphics. Characters can be rotated in 90 degree steps to achieve vertical and upside-down printing. The new input routine permits the generation of all the new characters from the standard keyboard. An enhanced full screen editor is also provided with full cursor motion, character insertion and deletion, and several other featues to speed editing. The Character Edit Program which is available on cassette, permits one to easily construct or modify a character pattern by working with a greatly magnified grid. SUPERCHIP was designed to be transparent to existing Apple software, and most programs run under it with no modification. SUPERCHIP supports printing through either the communications or printer interface board. The APPLESOFT board is also supported. Since the SUPERCHIP uses high resolution page 1, the RAM area 2000 to 3fff must be protected from basic. In a 16K system this can be done with HIMEM; 8192 before building or loading a program. Larger memory systems may occasionally have to protect this area with appropriate Lomem or Himem commands. SUPERCHIP supports the Applesoft board, but its switch must be set to select INTEGER BASIC on rest. SUPERCHIP automatically selects Applesoft on initiation. To use integer BASIC with an Applesoft board and SUPERCHIP, enter the monitor command C081 prior to the CTL B or C command.
PRICE: $99.95

TITLE: SUPERKIM
PUBLISHED BY: MICROPRODUCTS

Here is a powerful microprocessor control system developement tool and a complete real-time multitasking microcomputer in one package. There is no need to buy a power supply, motherboard, memory boards and separate I/O boards when your requirements may be satisfied by a SUPERKIM. You may only need a couple of wirewrap sockets and a few LSI chips installed in the big 3" x 10" onboard prototype area to accomplish the required memory expansion and interface with the real world.

Some single chip interface devices available are: UARTS, 16 channel-8 bit analog to digital data acquisition systems, floppy disk controllers and dot matrix printer controllers. Furthermore, you will shortly by able to buy single 5 volt supply pseudo static 8K byte (that's right, you read it right, 8K x 8 bits) memory chips in a single 28 pin package. These chips use the same technology developed for the 64K bit dynamic RAMs now being manufactured by TI, MOTOROLA and others. Just five of these chips and four 2732 EPROMs in the sockets already supplied in the SUPERKIM will yield a fully populated SUPERKIM with 44K bytes of RAM, 16K byes of EPROM with serial and parallel I/O ports, and enough room left over in the prototype area for a LSI floppy disk controller chip. ZILOG already has, on the market, a 4K byte version of this memory chip that is pin compatible with the 8K byte version; no need to rewire your sockets when the larger memories become available. Put in 24K now and upgrade later to 44K.

If you started with a KIM-1, SYM-1, or AIM-65 and tried to expand it to the basic capabilities of the SUPERKIM, you would need a power supply ($60), a motherboard ($120), a prototype board ($30), a memory board ($120), and an I/O board ($120) for a total cost of from $620 in the case of the KIM-1 to $825 in the case of the AIM-65. You still would not have real-time multitasking capabilities.

Multitasking is a situation where the microcomputer appears to be doing more than one job simultaneously. For example, the microcomputer could be sending data to a printer, accepting analog data from a 16-channel data acquisition system and presenting data to an operator monitoring a LCD or LED display, all the while keeping track of time.

Multitasking is accomplished on the SUPERKIM by use of vectored priority interrupts and a real time clock. This real time clock is the implemented using one of the our on board 6522 programmable tone generators.

The SUPERKIM, with its keyboard, display and ROM monitor, can be used as a system analyzer for troubleshooting hardware and software in-the-field or during system development as an in circuit emulator. The monitor can stop the CPU at any point in the program, step through the program, change the contents of the systems' memory and CPU registers, and record the CPU's registers during a selected portion of the program. It offers one of the most powerful combinations of development and diagnostic tools available on the market today.

PRICE: 395.00

TITLE: SUPERTALKER
PUBLISHED BY: MOUNTAIN HARDWARE

Give voice to your Apple. Supertalker allows you to add the dimension of human speech output in your computer programs. Add voice to games. Program verbal prompting for the operator of your business system. Use verbal warnings under program control as an enunciator in commercial security or control rooms. Create educational programs that verbally coach the student.

THE SUPERTALKER SYSTEM.

SuperTalker is a new Mountain Hardware peripheral system which allows the Apple II computer to output exceptionally high quality human speech through a loudspeaker under program control. Output may also be directed through P.A. or stereo system. Initially, spoken words are digitized ubti RAM memory through the system microphone. Speech data in RAM may then be manipulated like any other stored data.

A COMPLETE PACKAGE.

The SuperTalker peripheral system consists of:

The SuperTalker peripheral card which plugs into a loudspeaker; easy-to-use operating software and documentation; plus, two ready-to-run SuperTalker programs.

OPERATING SYSTEMS.

In order to achieve maximum utility using SuperTalker, the SuperTalker Disk Operating System permits output of human speech under program control with direct I/O routines. It also provides a preparation program which permits the creation of voice files on diskette. BASIC program routines are provided which require only one-line statements to output a word or phrase. Routines also support cassette storage.

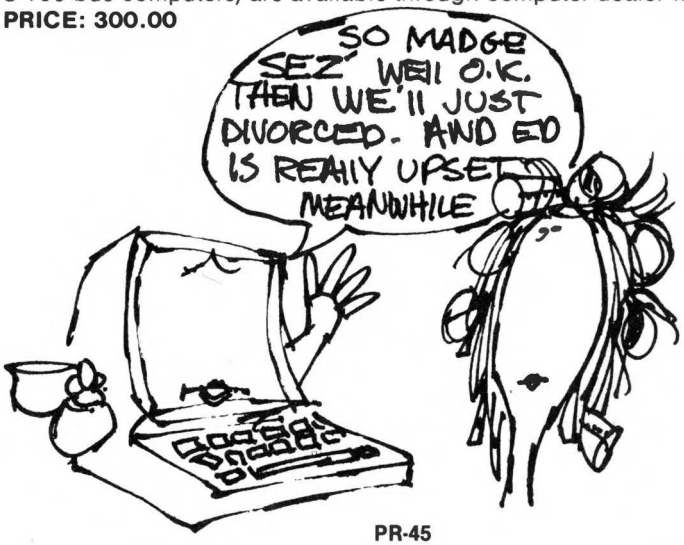
TEACH YOUR COMPUTER TO TALK.

For assembled and tested, SuperTalker gives your Apple II a voice in the matter.

AVAILABLE NOW.

Mountain Hardware's SuperTalker Apple Clock and 100,000 Day Clock™ (for S-100 bus computers) are available through computer dealer worldwide.

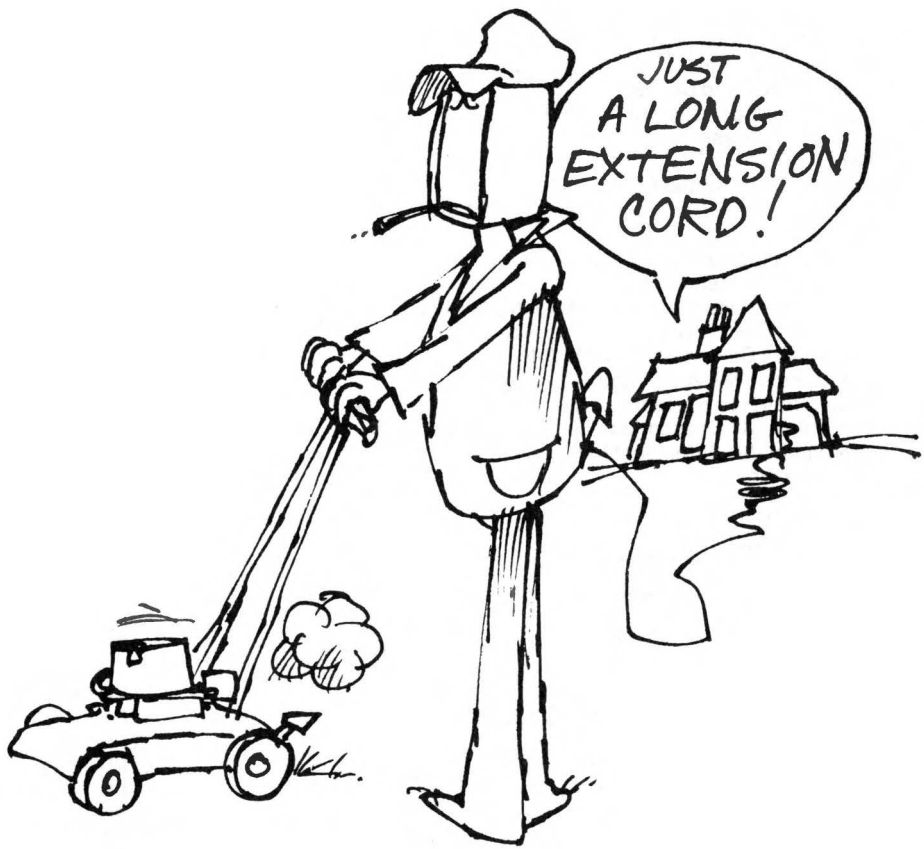
PRICE: 300.00



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Vet/2 Voice Entry Terminals 2PR-17



TITLE: ANALOG INPUT SYSTEM
PUBLISHED BY: INTERACTIVE STRUCTURES INC.

8 bit precision, 16 channels. General purpose data acquisition, 70 microsecond speed. 0 to 5 Volts standard, conditioning available. A workhorse in the lab and factory since 1977.
PRICE: $299.00

TITLE: ANALOG INPUT SYSTEM
PUBLISHED BY: INTERACTIVE STRUCTURES INC.

12 bit precision, 16 channels. High Performance Data acquisition, 20 microsecond speed. 8 input ranges, .1 to 10V, selected by software. External triggering and interrupt capability.
PRICE: $550.00

TITLE: ANALOG OUTPUT SYSTEM, 8 bit precision, up to 8 Channels. Standard ranges 0 to 10V, 0 to 5V, or -5 to +5V. Each channel has 8-bit memory. Pair channels for 16-bit precision.
PRICE: $175.00 - 440.00

TITLE: ARAPPLE
PUBLISHED BY: MULTI-MEDIA VIDEO

A bilingual Apple II system in Arabic language is designed for Arab world and has extensive peripheral support, including the *Arabprint 160* ($4,200). Software includes Arabic/English video dictionary, voice data input device called *Arabic Speechlink,* bilingual graphics tablet, business programs for accounting, inventory, scheduling, data base management; cash register system; education programs for basic and advanced math, statistical analysis, medicine and general survey of Arab countries; and Videomax game series specifically designed for Arab users. Of particular note is bilingual adaptation of NESTAR's Cluster/One Model A system through which 65 Arapples can interface in a single network.
PRICE: $2,850, Arapple alone

TITLE: COMMUNICATIONS INTERFACE SYSTEMS
PUBLISHED BY: MACROTRONICS, INC.

Send & Receive RTTY/CW.
Complete Hardware & Software Package.
Extensive User Manuals.
PRICE: From $149

TITLE: CONVERSION KIT I
PUBLISHED BY: SERVICE TECHNOLOGIES, INC.

Expand the capabilities of your 779 line printer to include word processing!! Available to all Centronics 779 and TRS 80 Printer I owners is the option of lower case and changing slash 0 Zero to standard 0. No etch cuts or soldering needed. Installs in minutes with a screwdriver. No program modification or additional interface is required.
PRICE: $125.00
UPER/LOWER CASE NOW AVAILABLE FOR THE FOLLOWING CENTRONICS PRINTERS: 101AL, 102BL, 306, 500, 501, 503, 700, 701, 702, 703, 780, 781.

SAVE! Buy Service Technologies "Conversion Kit I" and "Conversion Kit II" together for the single price of $199.00

TITLE: CONVERSION KIT II
PUBLISHED BY: SERVICE TECHNOLOGIES, INC.

For all Centronics 779 & TRS 80 Printer I line printers!!
Our "Conversion Kit II" Motor Controller gives your 779 the ability to turn the motor on and off automatically. Removes the annoying noise of constant run, increasing the life span of your 779 and TRS 80 line printer motor! No soldering, software or hardware changes needed. Installs easily.
PRICE: $95.00

TITLE: CRYPTOGRAPHY KIT
PUBLISHED BY: WESTERN DIGITAL

The Cryptographic Primer Kit educates computer users about cryptography, thereby enabling them to encode and protect data against unauthorized access. An RS-232 interface board is included in the Kit. The interface board functions at 300 bps (bits per second) and contains the WD20001F LSI (large-scale integration) implementation of the National Bureau of Standards Data Encryption Standard. A Cryptographic Primer describes how the user can implement different cryptographies in software in conjunction with the board. It also provides examples for debugging software. An assembly and wiring manual includes wiring diagrams, assembly and operating instructions.
PRICE: $395, kit
$495, assembled

TITLE: DIGITAL INTERFACE SYSTEM
PUBLISHED BY: INTERACTIVE STRUCTURES INC.

32 lines, 4 timers. Each line set by software as input or output. Parallel binary, byte, or BCD data. Four independent 16-bit Interval Timers. Output Current Driver option available. Optical isolation available (UI16, below).
PRICE: $330.00

TITLE: DS-65 DIGISECTOR®
PUBLISHED BY: THE MICRO WORKS

Your computer can now be a part of the action, taking pictures to amuse your friends, watching your house while you're away, taking computer portraits ... the applications abound! The DS-65 is a random access video digitizer. It converts a TV camera's output into digital information that your computer can process. The DS-65 features:
High resolution: 256 x 256 picture element scan
Precision: 64 levels of grey scale
Versatility: Accepts either interlaced (NTSC) or industrial video input
Economy: A professional tool priced for the hobbyist
The DS-65 is an intelligent peripheral card with on-board software in 2708 EPROM. Check these software features:
Full screen scans directly to Apple Hi-Res screen
Easy random access digitizing by Basic programs
Line-scan digitizing for reading charts or tracking objects
Utility functions for clearing and copying the Hi-Res screen
Let your Apple see the world!
PRICE: $340.95, DS-65
$299.00, Advanced Video FSII Camera
$599.00, Special Combination Price

TITLE: DATA ACQUISITION BOARD
PUBLISHED BY: MICROPRODUCTS

This product contains two 8 bit 15 micro-second resolution time Analog to Digital channels and two 8 bit 2 micro-second settling time Digital to Analog channels. Bipolar and unipolar reference level changes are dip switch selectable for both input and output, the company said.
This product requires no wait loops in either Basic or assembly language allowing very simple, straightforward programming. Examples are supplied in the accompanying documentation. The board will run in any Apple slot allowing multiple boards to convert the Apple to a cost effective industrial process control device.
A few of the possible applications for this board are: graphic representation with the appropriate amplifiers for EMG, EKG and EEG; laboratory monitoring and control; automatic telescopic drives in hour angle and declination with feed back; stereo music synthesis; experimenting with multiple voice speech synthesis; software development for industrial control processes; electro acupuncture with physiological feedback; and X-Y chart recorders and digitizers.
This board with documentation and a simple 4 voice music synthesis program.
PRICE: $249.95

TITLE: DOUBLE SIDED DISKETTES
PUBLISHED BY: OMNICO

WRITE NOTCHED ON BOTH SIDES (No more hole punch!!) REINVORCED CENTER RING.
OMNICO disks are certified 100% error-free over the *entire* usable disk surface. The special magnetic oxide coating used for the Apple diskettes has proven itself in more than 50 million disks world-wide. We take the "extra step" and burnish to flatten the oxide and provide a glass smooth coating which makes it possible for OMNICO to offer a special 5-Year Warranty.
PRICE: $7.99

TITLE: DUAL PARALLEL INTERFACE
PUBLISHED BY: TEXCOM

Two 8 bit parallel ports
Two 16 bit programmable interval timers
One serial port
Programmable interrupt control
256 Bytes of onboard PROM for driver routines
PRICE: $109.95

TITLE: 8" DISK CONTROLLER
PUBLISHED BY: SORRENTO VALLEY ASSOCIATES

Now — double sided option!
Doubles Apple II storage
Apple DOS compatible
Shugart 800 or 850 compatible
IBM 3740 data entry capability
CP/M, UCSD PASCAL capability
PRICE: $400

TITLE: DISK CERTIFIER AND COPIER
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Jacc Inc.) A handy utility program that certifies the acceptability of blank diskettes and rejects those with flaws. It also includes a fast machine language

disk copying program that will work on single and dual drive systems. 07809, APPLE II Disk
PRICE: $19.95

TITLE: DOUBLE THE CAPACITY OF YOUR DISK
PUBLISHED BY: AUTOMETRICS INC.

This kit allows you to write and read on both sides of your Apple floppy disk.
Does not affect disk drive reliability
Easily installed in 15 minutes.
Double floppy disk capacity from 116K to 232K bytes.
PRICE: $9.95 plus $1.00 postage.

TITLE: EXPANSION CHASSIS
PUBLISHED BY: MOUNTAIN COMPUTER INCORPORATED

QUALITY YOU EXPECT
Eight more slots for your Apple! Now you can bank-select eight more peripheral slots with immediate or deferred software commands — like having up to 16 peripheral cards "on line" — or use the Select/Deselect switch mounted on the front panel.
Expansion Chassis' heavy-duty power supply is primarily for peripherals, without the heavy demand of motherboard support chips required in your Apple. This means much more power is available for peripherals than in your Apple itself! If you've run out of room in your Apple — Expansion Chassis is your answer. Drop by your Apple dealer for a demonstration, or contact Mountain Computer for the location of the dealer nearest you.
PERFORMANCE YOU DEMAND
Eight mirror image I/O slots of the Apple
Fully buffered, bi-directional data lines
Apple II compatible interface card
Dual selection capability; hardware or software
Immediate or deferred selection in software mode
From BASIC, a single POKE command turns the chassis ON or OFF
Compatible with all software
Dedicated power supply with approved power transformer

TITLE: FANTA STICK-I
PUBLISHED BY: TIP INC.

FANTA STICK-I is a multifunctional terminal that lets you draw and move patterns on the screen, and is also capable of analyzing drawn patterns. FANTA STICK-I is designed to improve functional performance using integrated circuits and highly manipulative telephone keys.
It is plug compatible with APPLE II and especially designed for such fields as production of commercial animation, promotional demonstration, graphic analysis, and development of software.
HARDWARE
FANTA STICK-I consists of stick, SW1-3 switch, tenkey, I/O expansion connector, pilot lamp, and changeover switch on the reverse side. Stick and CH1-3 switch are used for making patterns and playing games. Tenkey is used for inputting dot to the screen, graphic mode command, box-position command, and save and load patterns. I/O expansion connector is useful with I/O connector inside APPLE by only changing switch for using expansion connector without removing FANTA STICK-I.
If you need higher performance, you just add another FANTA STICK-I to I/O connector.

SOFTWARE
A feature of this software is the division of the screen into twenty individual boxes, for drawing patterns, and memory. Then the boxes are reassembled to make a whole screen.
It does not only draw patterns by putting together the boxes and patterns made with slide and revolve command, but composes new screens by putting together the managed pattern.
Box system has the advantage of a close management.
There are many features, such as making patterns with expanding box by three times on the screen, computing the area of dots in a designated window.
Using a disk, you can freely operate a graphic pattern with save and load command.

TITLE: FLASH & CRASH SOUND EFFECTS
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(American Micro Products)
A collection of 18 subroutines that can be incorporated into your own programs to produce sound effects with the American Micro Products music board. Included are Train, Explosion, Phaser, Chimes, Sirens, Jet and 12 others. 08709, APPLE II Disk
PRICE: $39.95

TITLE: HOW TO BUILD A COMPUTER-CONTROLLED ROBOT
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Loofbourrow) Contains 5 control programs that consist of Joystick Control Program; Self-Direction Program; Impact Sensor Control Routine; and more. 00100, KIM-1 tape
PRICE: $14.95

Should be used with text HOW TO BUILD A COMPUTER-CONTROLLED ROBOT, 5681 8
PRICE: $9.75

TITLE: INTERACTIVE VIDEO
PUBLISHED BY: SOLUTIONS, INC.

The only professional/industrial quality system on the market today. Easy software control of all: video, audio, computer functions. May be used with: BASIC, PASCAL, FORTRAN, PILOT, ASSEMBLY. Complete audio/video switching. Designed for use with: APPLE, BELL & HOWELL, PLATO. The most powerful system available. Uses simple two-letter commands.
Control method provides: • Tape identification code • Frame number code • Frame-accurate access • Error free location of any frame or segment • No tape slippage to generate cumulative access errors • Complete software control of all VTR functions.
SYSTEM INCLUDES:
• RAVE controller unit • PLATO compatible interface for the APPLE II and Bell & Howell Microcomputers • Sony 323 (Beta) or PANASONIC NV8200 (VHS) VTR • Complete demonstration, tutorial and editing software • all needed cables and connections.
PRICE: $4995.00

TITLE: INTELLIGENT DIGITAL PLOTTER
PUBLISHED BY: INTERACTIVE STRUCTURES INC.

With interface and firmware. Full vector capability - absolute and relative. Full character set and text plotting. Plots directly from BASIC arrays and strings. 7" x 10" page, 2000 X 1400 resolution.
PRICE: $1250.00

TITLE: INTELLIGENT PRINTER
PUBLISHED BY: INTERACTIVE STRUCTURES INC.

With interface and firmware. 80 chars/sec; 132, 80, or 40 columns/page. Complete program interface firmware. HiRes screen print with a single command.
PRICE: $1045.00

TITLE: INTERACTIVE VIDEO INTERFACE/C.A.V.I. Model 400
PUBLISHED BY: BCD ASOCIATES, INC.

A single board video tape controller for Apple II microcomputers. The system hardware/software permits precise video tape positioning by counting pulses from the control track of the tape.
The interface contains a video/audio switcher to allow alternate display of computer-generated or taped video on a single monitor. The system will control industrial type VHS, Beta, and ¾" video recorder/players. No modifications to the computer or the VTR are required.
Basic software is included on disk to allow the user to "Search To" the beginning of a video scene and "Play Until" the end of that scene. Starting and ending frame numbers of each scene may be saved to the disk for future reference.
PRICE: $495.
An advanced Computer Assisted Instruction software system is available on a separate disk. "The Instructor" allows persons with no computer expertise to create and modify C.A.I. lessons and video tape logs.
PRICE: $295

TITLE: KEYBOARD ENHANCER
PUBLISHED BY: VIDEX

The Apple II has a simple reliable keyboard. Unfortunately, you can only enter upper case text directly from the keyboard. Now, Videx introduces a powerful KEYBOARD ENHANCER to correct this minor annoyance.
Your Apple II suddenly performs as if it has an ordinary typewriter keyboard. Three entry modes are now keyboard selectable. The original keyboard entry mode is still fully functional, adding the typewriter mode with upper and lower case entry. Finally, the shift lock mode is available for the typewriter mode also. In both of the last modes, the shift keys will perform exactly as they do on any typewriter.
But that's not all. In the normal Apple II mode, KEYBOARD ENHANCER allows you to enter 9 new characters directly from your keyboard utilizing the shift keys in conjunction with other alphabetic keys. A new Power key cap is included with two built-in LEDs for instant positive identification of which mode you are in. Accidental RESETs are prevented by requiring that the Control key be depressed with the Reset key to activate the RESET operation. The easy installation and simple, rugged hardware design mean many years of trouble free use.
You may utilize the KEYBOARD ENHANCER with Videx's VIDEOTERM for full 80 volumn by 24 line terminal quality display (usable with both BASICs and Pascal). Or use it with Dan Paymar's Lower Case Adaptor for display of upper and lower case characters on the standard 40 column wide Apple II video display. Or use it alone to simplify your word processing text entry.

KEYBOARD ENHANCER is recommended for use with Apple II. Revision Zero and One keyboards (those lacking the Control-Reset feature). The kit includes 5 ICs mounted on a PC board, the necesary mounting screws (no drilling necessary), a jumper cable. Power key cap with LEDs and cable assembly and instructions for quick installation and trouble free use. Visit your local Apple dealer today or contact Videx directly. And upgrade to full typewriter keyboard performance with the KEYBOARD ENHANCER.

TITLE: MODEL 7424 CALENDAR/CLOCK MODULE
PUBLISHED BY: CALIFORNIA COMPUTER SYSTEMS

Time-keeping on the Apple. Clock includes three separate, jumper-selectable driver programs, plus space for user-written drivers, onboard in 1K of EPROM. One driver transfers data and time in Mountain Computer format to Apple's input buffer; another uses interrupts to write correct time into an Applesoft string from which it may be called by software; third driver uses interrupts to maintain correct time on CRT screen. Because data is addressed one decimal digit at a time, programmer has complete freedom of data format.
PRICE: $125

TITLE: MAURO PROAC MP-250 PLOTTER
PUBLISHED BY: LEAPAC SERVICES

MAURO PLOTTER — Uses 11" by 8½" or any length paper. Resolution is 200 steps per inch. 0.005" tracking error. Maura X-Y vector software with pen control is available for 8080/X80, 6502, & 6800 micro-processors. Requires 5 bits of a parallel output port. APPLE, TRS-80, and RS232 Interfaces are available as I/O Options.
LEAPAC SOFTWARE — Supports complete 2D & perspective plotting, including ASCII and curve generation. Available as relative linking libraries (L80) for MICROSOFT compatible software products, FORTRAN-80, COBOL-80, COMPILER BASIC, and MACRO-80 in CP/M compatible files on 8" IBM-3740 disks or 5¼" NORTHSTAR formatted disks.
L2D — X-Y plot package. Contains over 200 entries, including CALCOMP compatible calls such as PLOT and WHERE.
L3P — Perspective plot package. Contains over 70 entries. Capable of ZOOMING. FLY-BYS, ANIMATION and much more.
PRICE: $695
$795, with L2D Plot package
$950, with L2D & L3P packages

TITLE: POWER INTERFACE SYSTEM
PUBLISHED BY: INTERACTIVE STRUCTURES INC.

For use with DI09. Switch AC power on or off, multi-channel, up to 3 Amps. Monitor DC and logic signals in noisy environment. Plug-in modules for AC or DC, Input or Output. All lines Optically Isolated - individually fused.
PRICE: $90.00 - 345.00

PERIPHERALS & ACCESSORIES

Heuristics Robot Car for Apple II, radio controlled car with car controller, interface card and demonstration tape
PRICE: $199.00

Heuristics Model 70 controller for Apple II with connector
PRICE: $85.00

Houston Instrument HiPlot, RS232 or parallel interface plotter, 480 increments/sec, .0005 inch step
PRICE: $1085.00

Houston Instrument HiPad, RS232 or parallel interface digitizer, 11X11 pad size, resolution ± .005 inches, accuracy ± .015 inches, 100 coordinate pairs per second

TITLE: PROGRAMMABLE, INTELLIGENT I/O
PUBLISHED BY: GPA ELECTRONICS, INC.

More than a telecommunications I/O. More than an intelligent hard copy interface. GAP's Intelleigent I/O is a COMPLETE MICROCOMPUTER on a 4½" x 7" card!
Completely programmable via Resident Monitor in PROM, the Intelligent I/O lets you select the operation you desire, then helps you complete the task.
FEATURES:
6502 Microprocessor.
2K E-PROM: 1K RAM as buffer.
Serial and parallel I/O through four ports. Device can communicate with two peripherals simultaneously; RS-232 devices can communicate with parallel devices.
Hard copy interfacing with either RS-232 or 20MA devices (Please specify.)
Accommodates all baud rates to 9600.
Selectable line feed, carriage return delay and characters per line.
Supports standard EIA modem-control signals.
Handshaking, of course.
Functions as Data Channel, SPOOLER, or Programmable Filter.
Remote access to Basic.
Fully disk compatible.
Will provide secure, encrypted telecommunications with optional programming.
Complete dial-up and time sharing functions.
Allows ganging of microcomputers for multi-processing.
Accesses and controls servos, sensors, articulated devices or transducers (with appropriate firmware, available from GPA.)
Functions as disk controller, resident assembler, E-PROM burner (with optional firmware.)
Integral power supply (5VDC @ 350mA.) Completely portable, stand-alone computer.
Fully documented, texted and guaranteed.
PRICE: $299.95 (110VAC) or $320.95 (250VAC)

TITLE: NOISEMAKER
PUBLISHED BY: ACKERMAN DIGITAL SYSTEMS, INC.

SOUND EFFECTS! GUNSHOTS! PHASERS! MUSIC! "OUTER SPACE NOISES" and much more...
Apple II Bus™ boards use the GI AY 3-8910 to produce sound effects under software control.
One board audio amp
Breadboard area with +5, gnd
Tone generators, noise source
Envelope generator, I/O ports
Full Manual includes: Construction notes, software examples, full notes on AY 3-8910 schematic, parts list, etc. P.C. board soldermasked, gold contacts, parts silkscreen

PRICE: $79.95, plus $1.50 shipping & handling, Assembled & texted noisemaker II
$34.95, plus $.50 shipping, noisemaker P.C. board & manual
$34.95, plus $.50 shipping, noisemaker II P.C. board & manual

Write for details on the new ADS sound effects interpreter, the "Sound Writer"

TITLE: RS-232 SERIAL INTERFACE
PUBLISHED BY: TEXCOM ENGINEERING ASSOCIATES

15 Software selectable baud rates from 50 to 19,200 baud.
Programmable interrupt control, word length, number of stop bits and parity select.
256 Bytes of onboard PROM for driver routines.
Will interface to most RS-232 compatible printers, modems, etc.
PRICE: $119.95

TITLE: RAMCARD™
PUBLISHED BY: MICROSOFT

Memory — you never seem to have quite enough of it.
But if you're one of the thousands of Apple owners using the SoftCard, there's an economical new way to expand your memory dramatically.
16K ON A PLUG-IN CARD.
Microsoft's new RAMCard simply plugs into your Apple II, and adds 16K bytes of dependable, buffered read/write storage.
Together with the SoftCard, the RAMCard gives you a 56K CP/M system that's big enough to take on all kinds of chores that would never fit before (until now, the only way to get this much memory was to have an Apple Language Card installed).
GREAT SOFTWARE: YOURS, OURS, OR THEIRS.
With the RAMCard and SoftCard, you can tackle large-scale business and scientific computing with our COBOL and FORTRAN languages. Or greatly increase the capability of CP/M applications like the Peachtree Software accounting systems. VisiCalc™ and other Apple software packages can take advantage of RAMCard too.
And RAMCard gives you the extra capacity to develop advanced programs of your own, using the SoftCard and CP/M. Even with the RAMCard in place, you can still access your ROM BASIC and monitor routines.
JOIN THE SOFTCARD FAMILY.
The RAMCard is just the latest addition to the SoftCard family — a comprehensive system of hardware and software that can make your Apple more versatile and powerful than you ever imagined.
Your Microsoft dealer has all the exciting details. Visit him soon, and discover a great idea that keeps getting better.

TITLE: REAL-TIME ANALYZER
PUBLISHED BY: EVENTIDE CLOCKWORKS, INC.

The AIB232, real-time audio spectrum analyzer for the Apple divides the audio spectrum from 200Hz to 20kHz into 31 third-octave bands, and displays these bands with their relative amplitudes on the computer CRT. The units can be used for measuring sound and noise levels, for optimizing the equalization of a hi-fi or public address system, for checking the frequency response of audio components, and for speech and sound pattern recognition.
The AIB232 displays the color of each bar under software control.

TITLE: SIGNAL CONDITIONER
PUBLISHED BY: INTERACTIVE STRUCTURES INC.

For analog input systems. Amplify and filter input signals. Channel characteristics set by plug-in module. Range and offset trim on each channel. 1-, 4-, or 16-channel models standard.
PRICE: $44.00 - 440.00

TITLE: SCITRONICS REMOTE CONTROLLER
PUBLISHED BY: SCITRONICS INC.

Whether it's the intricate lighting for a Broadway Ballet or the simple remote lighting of pool tables in a Dallas billiards hall, people are finding out SciTronics Remote Controller can meet their needs.
HERE'S WHY:
Controls 256 BSR remote switches — not just 16
Hardward driven — requires minimum software
No ultrasonic link — prevents erratic operation
No BSR command module necessary
REAL TIME CLOCK GIVES REMOTE CONTROLLER AN ADDED DIMENSION!
Real Time clocks are now available to make your remote controller even more powerful. The RTC feature allows for energy consumption scheduling, event scheduling and much more. Your imagination is your only limitation when it comes to the ways which this RC/RTC combination can be used.
REAL TIME CLOCKS FEATURE:
Lithium battery back-up
Crystal controlled accuracy (.002%)
Clock generates interrupts (seconds, minutes, hours) for foreground/background operation
Complete software in BASIC to Set and Read clock
PRICE: $149, S-100 Controller Board
$159, S-100 Real Time Clock Board
$184, Encased controller (TRS-80, Apple II etc.)
$269, Encased controller & Real Time Clock (TRS-80, Apple II etc.)
$129, Apple II Clock Board

TITLE: SUPERCLOCK II
PUBLISHED BY: WEST SIDE ELECTRONICS

A real-time clock, combines time of day and calendar features with powerful interrupt capabilities. Extremely easy to use, Superclock offers four software-controlled interrupts from one msec to one hour, plus an Appleclock emulation mode that makes it compatible with existing software. Works with both Basics and Pascal. Battery included.
PRICE: $159

TITLE: TRAP 65
PUBLISHED BY: EASTERN HOUSE SOFTWARE

3½ x 4¾ inch circuit board. Plugs into 6502's socket via ribbon cable. Traps unimplemented opcodes by forcing BRK instructions on data bus. Does not slow system. Greatly aids in locating bad opcodes during debugging. For any 6502 based computer.
PRICE: $149.95 ($4.00 postage)

TITLE: VIDEOPRINT 3000
PUBLISHED BY: IMAGE RESOURCE

The convenient economical means of obtaining distortion-free hardcopy from your Apple computer graphics display in full, brilliant color. The entire system is self contained in the convenient desk-top unit shown above.
Videoprints eliminate such off-the-screen photography problems as barrel distortion, color desaturation and loss of color fidelity. Videoprints also minimize the effects of raster lines and video noise.
Videoprints are instantly produced with Polaroid® SX-70 or Polacolor 4" x 5" films, as well as with conventional color negative or 35 mm slide transparency films, offering you a range of handy sizes. The pictures are made at the push of a button.
If you've ever wanted to distribute copies of computer graphics or file them in your permanent records, or send them through the mail or project them as slides, you need Videoprint.
Hook up to one single cable and you're ready to capture any image on the Apple monitor screen. Other personal computers with color graphics capability work with the Videoprint 3000, too.
In fact if you use computer graphics in any form, you really need Videoprint 3000. Find out all about this exciting new tool. Write or call us today for your local dealers' location.

TITLE: 16 CHANNEL VARIABLE A-D BOARD
PUBLISHED BY: COMPUTER TECHNOLOGY ASSOCIATES

Now you can digitally display, store, analyze and print your measurements!
The new ADC-16B A-D Board can be used for:
POSITION MEASUREMENTS
PRESSURE MEASUREMENTS
PHOTOELECTRIC MEASUREMENTS
TEMPERATURE MEASUREMENTS
A COMPUTERIZED VOLT-OHM METER
You get a complete software package including a test kit, calibration method and various applications. This is a Variable Gain Board that allows increased measurements from 5 volts up to 100 volts.
PRICE: $179.95

TITLE: MODEL 7728 CENTRONICS PRINTER INTERFACE
PUBLISHED BY: CALIFORNIA COMPUTER SYSTEM

The Model 7728 Centronics printer interface gives Apple II users compatibility with a variety of printers using Centronics-type parallel interfaces, including the Paper Tiger, the Microline 80, the Microteck MT-80P and Centronics printers. The 7728 with documentation.
PRICE: $119.95

TITLE: 16 Ch A-D CONVERTER
PUBLISHED BY: TEXCOM

PRICE: $149.95
Custom interfaces and software available.

TITLE: THE BUFFERED MODEM
PUBLISHED BY: AGENT COMPUTER SERVICES

ADVANCED TELECOMMUNICATIONS OPERATING SYSTEM FOR THE APPLE II. This powerful telecommunications operating system has a wide variety of useful features that will allow you to make the most efficient use of your system. A simple to use SYSTEMS CONFIGURATION program is provided to customize the BUFFERED MODEM for your hardware configuration. Works with Micromodem II as well as serial card & acoustic coupler combinations.
FEATURES:
PRINT SPOOLER — Supports most popular Apple printer cards and allows ANY SPEED PRINTER to be used with the modem by storing characters in memory if the printer is not fast enough to keep up with the modem transfer. Buffer size may be set by the user.
COMMUNICATIONS FORMAT CONTROL — menu driven communications protocol setup. User can specify custom default setup.
BLOCK CAPTURE BUFFER FOR DISK STORAGE — Allows the user to capture transmissions in memory for subsequent transfer to disk file or printer. Complete record of modem session may be saved, or just input or output.
MODULAR OPERATING SYSTEM DESIGN — Allows new features to be integrated easily as they become available.
This program is the State-Of-The-Art in telecommunications software for the Apple Computer. Due to the ease of integrating new printer, modem and display board modules, as well as custom machine language routines, this program provides the integrated systems approach that today's wide variety of peripherals demand.
PRICE: $85

TITLE: IMAGE-WRITER
PUBLISHED BY: AGENT COMPUTER SERVICES

FOR SPINWRITER/SPINTERM — DIABLO — QUME. Now you can have HI-RES GRAPHICS PRINTING for your letter quality printer at a very modest price. Each of these printers has the capability to print in the graphics mode, but until now there has not been a product to take full advantage of this capability.
COLOR TOO!!!
Not only can our software transfer any HI-RES picture from the APPLE, IT CAN DO IT IN WITH COLOR SEPARATION!! Of course, normal black and white pictures may also be printed, and black and white pictures with a different symbol for each color may be printed.
FEATURES INCLUDE — Either page or portion of a page may be printed. Each color may be assigned a separate symbol. Customizing program provided for user definition of most commonly used setups. Fully documented.
PRICE: $69.95

TITLE: PRINTERGRAPHICS
PUBLISHED BY: AGENT COMPUTER SERVICES

Hard copy graphics for your Apple using the OKIDATA MICROLINE 80 Printer with the OKI-IMAGE/OKI-ADAPTER. Now you can utilize all of the features of the MICROLINE 80 including GRAPHICS. All you need is the OKI-IMAGE/OKI-ADAPTER. This package includes a cable which makes both TEXT and GRAPHICS available with the APPLE II, and a very powerful HI-RES SCREEN DUMP. The screen dump will print either page of HI-RES, or any portion of either page of HI-RES in any of the six graphic print sizes, and in NORMAL or INVERSE print.
Cables are avilable to fit any of the popular parallel printer cards.
PRICE: $89.95

TITLE: WOODPECKER
PUBLISHED BY: SYSTEMS FORMULATE CORPORATION

"Woodpecker" gives you an extra bonus usually reserved for regular-size printers...80 characters per line!
"Woodpecker" features an efficient uni-hammer printer head, 5 x 7 matrix, and was designed for interface to Apple, PET and TRS 80. It uses an economy-weight, continuous-form paper and will make up to three copies (including the original).
"Woodpecker's" mark set for sharp graphic reproduction and character set for 128 character (alpha-numeric and symbols) printing give full printer capabilities.
PRICE: $450, plus shipping & handling
$80, Apple or PET interface

TITLE: B&W VIDEO CAMERA (SANYO MODEL VC1610X)
PUBLISHED BY: COMPUTER STATIONS, INC.

Camera used with our Dithertizer II board for video input into the Apple. Camera is designed to provide total flexibility in CCTV and VTR applications. This dependable, all solid state video camera features precision line locked internal sync. or external EIA drive, wide range ALC, high resolution and 16mm, F1.6 lens. 117 VAC, 60 Hz.
PRICE: $410.00

TITLE: CHRONTIONIX ACU-1
PUBLISHED BY: FRISBEE ELECTRONICS

Three-year battery backup requires no recharging. Clock includes complete clock features plus programmable interrupts. Slot independent firmware allows easy access from Basic. Features include power-down ROM and high accuracy crystal. Software set to date forms, allow stopwatch functions, time conversions, is available on cassette or disk.
PRICE: $109

TITLE: FAN FOR APPLE II COMPUTERS
PUBLISHED BY: M & R ENTERPRISES

With many peripherals in the I/O ports, this fan can greatly increase air circulation.
PRICE: $49.95

TITLE: OPTICON
PUBLISHED BY: DR. LYNAS

Optical tactical sensory device. Attaches to video monitor and converts text copy to Braille impulse.

TITLE: PASCAL FAST FLOATING POINT BOARD
PUBLISHED BY: COMPUTER STATIONS, INC.

For the APPLE II or APPLE II PLUS, designed by David K. Hudson requires Pascal Language system.
Computer Station's Fast Floating Point Board is designed to enhance the arithmetic speed of the Apple II with UCSD Pascal. This board utilizes the AM9511 Arithmetic Processor and plugs directly into the Apple II to relieve it of the task of doing higher level math functions in softare. In addition to the transcendental functions supplied with Apple's UCSD Pascal, the user also has available TAN, ASIN, ACOS, SINH, COSH, and TANH and the constants 'pi" and "e". The following Pascal program was used to benchmark the standard "TRANSCEND" Library functions against the FFP Board "TRANSAM" Library functions. Time to complete the 5000 loop is expressed in seconds.

```
PROCEDURE FUNCTION;
  BEGIN
    INITCLOCK;
    FOR I := TO 5000 DO Z := (function);
    WRITETIME;
    WRITELN(PRINT,' [function]');
  END;
```

PASCAL
TRANSCENDENTAL FUNCTION
BENCHMARKS

Function	With Am9511 FFP Board	Without Am9511 FFP Board	Increased speed By a factor of:
NOP	5.5	5.5	1.0
FLT	6.0	6.0	1.0
SQRT	10.4	177.4	35.1
SIN	17.5	162.3	13.1
COS	17.8	185.6	14.6
ATAN	20.3	518.0	34.6
LOG	19.7	164.5	11.2
LN	19.4	145.4	10.1
EXP	18.9	160.2	11.5
TAN	19.7	N/A	
ASIN	23.8	N/A	
ACOS	24.0	N/A	
ATAN	20.3	N/A	

The NOP (no operation) function was used to time the overhead of the loop. To see the true ratio of the timings, subtract the NOP time from both sides. e.g. The square root function is 171.9:4.9 or 35.1 times faster using the FFP BOARD.
The FFP Board may also be used with BASIC on an Apple II (Integer) system. A patched version of Applesoft called Applefast is supplied with the board and may be loaded into RAM. All programs written in Applesoft may then be run without modification. The board may not be used with BASIC programs on an Apple II Plus due to the restriction of ROM BASIC.
The following program was used to benchmark standard Applesoft II against the patched version (Applefast)

```
10 FOR I = 1 TO 5000
20 X = (function)
30 NEXT I
40 END
```

BASIC
TRANSCENDENTAL FUNCTIONS
BENCHMARKS

FUNCTION	FFP BOARD	APPLESOFT II	Increased speed of execution by a factor of:
NOP	12 seconds	12 seconds	1.0
SQR	15	250	79.0
SIN	24	133	10.1
COS	27	135	8.2
TAN	27	246	15.6
ATN	27	224	14.1
LOG	25	114	7.8

The board comes with Pascal "TRANSAM" Unit (which may be incorporated in the system library), Applefast, and AM9511 reference manual.
PRICE: $450.00

TITLE: PROGRAM CONTROLLER
PUBLISHED BY: HOWARD SOFTWARE

A labor-saving utility package for convenient control of program running and listing. *Program Controller* includes keyboard and paddle control of speed, keyboard control of listing format, rapid cursor control, real-time control of line printer, and easy display of memory pointers. Cassette or disk.
PRICE: $39

TITLE: PULMONARY FUNCTION/SPIROMETER INTERFACE
PUBLISHED BY: VITALOGRAPH MEDICAL INSTRUMENTATION

Interfaces an Apple with Vital-o-graph Spirometer after entering patient data and all clinical information via Apple keyboard. Performs the test maneuver and automatically — calculate measure display a full range of volume data. Patient studies may be stored and recalled from disk. Numerous pulmonary function reports may be output to printer for hard copy. Simple to use, inexpensive pulmonary function testing system for physicians office, clinic, hospital, or industrial use.

TITLE: RAVE/INTELLIGENT INTERACTIVE TELEVISION
PUBLISHED BY: SOLUTIONS INC.

Knowledge is Information. Education is the Process of Transferring that Information

The success of every learning experience is a direct reflection of two things: the student's capacity to learn and the effectiveness of the teacher's presentation. Over the former, we have no control. Over the latter we do have control and the responsibility to communicate as effectively as possible.

In presenting ideas and information, we use two basic communication modes: audio (sounds) and visual (images). Audio methods include the spoken word, music and other sounds. Visual forms include the written word, physical gestures and expressions, drawings, painting, photographs, and television (film, videotape, video disc, and computer graphics).

Interactive Television gives educators the ability to integrate any, or all, of those devices in an *interactive* presentation to communicate information through the most effective combination of material.

Unfortunately, having the best information in the world is of no use unless there is a means of communicating it effectively. Regardless of how brilliant a lecturer may be, if he constantly loses track of where he is in his presentation and either rambles aimlessly or has to keep stopping to find his place — if he is constantly interrupting his presentation, no matter how well-structured, with coughing attacks, it will be extremely difficult, if not impossible, for the transfer of information to occur.

For Interactive Television to achieve its potential as an educational tool, it too must be able to communicate effectively by providing a smooth presentation of the information. Without that ability, it is no better than the lecturer above and the learning experience will be hindered.

RAVE is an intelligent, Interactive Television System that gives educators the ability to present information in a myriad of creative forms. And, more importantly, RAVE provides the *only* vehicle for an effective, smooth presentation of that information.

RAVE can mean the difference between Interactive Television becoming just another "thing" in the educator's tool-kit or being "the most efficient approach to meet these ends" of education.

RAVE, for Random Access Video Equipment, is an easy-to-use device that will have as great an impact on education as the introduction of microcomputers.

The following features of the RAVE Intelligent, Interactive Television System

distinguish it from any other random access television system in development or production today. Only RAVE provides the essential features needed for Interactive Television instruction. They have been incorporated into the RAVE System as a result of over three years design experience and a year and a half of field testing and user feedback.

TAPE CODING

1. *Non-Intrusive Coding System:* The RAVE frame number coding system allows full use of *all* audio and video space. This is important in that it allows courseware developers the fullest possible use of courseware space on the videotape. It is this system that gives the RAVE System a commanding range of capabilities that no other system can match. Other "frame accurate" systems use one of the audio tracks for coding, severely limiting the capabilities of courseware developers.
2. *Individual Frame Address:* The Non-Intrusive coding system identifies each frame with its own individual number. Therefore, there is no need to "initialize" a tape from its beginning; the RAVE System always knows exactly where it is on any coded tape.
3. *Frame Accurate Tape Access:* The unique frame coding system used in RAVE allows *precise* frame access. This system gives the courseware designer absolute control of the audio and television material. In serious Interactive Television applications, as in most things, "close" and "almost" count only in horseshoes and hand grenades.
4. *Relative Addressing or User Code:* This second method of coding the videotape allows the courseware to identify the tape in the VCR and reject (eject) it if it is incorrect. Courseware developers may also label portions of the television material in broader areas; much like chapter headings as opposed to page (frame) numbers within the chapters. This code is also *non-intrusive.*
5. *Video Disc Emulation:* Because of the RAVE's sophisticated coding system, courseware developers may use it to expertly emulate a video disc and easily develop interactive courseware for video disc production.
6. *Non-Coded Television Material:* The majority of Interactive Television systems today use a method of "counting pulses" to approximate positions on the tape. While this method is generally not effective, it may be useable in some situations. Since it does not involve any coding process, it might be useful in preliminary screening of television material or in exacting applications. Recognizing this, RAVE is designed to read pulses on coded and non-coded material as well as perform its more sophisticated operations with coded material. With coded material, any combination of the three systems (frame coding, relative addressing or pulse counting) may be used for greatest flexibility.

TITLE: SONIC
PUBLISHED BY: ELECTROSONIC

SONIC is a 3 projector processor with sophisticated performance. 1000 dissolve speeds. 100 light levels. 1000 animations. Tray position memory. The SONIC is RS232 compatible, which means that it can be controlled by a huge range of computer devices, and that it can take advantage of developments in microcomputer power throughout the 1980's.

THE SYSTEM. To make immediate use of SONIC, Electrosonic offers a Multi-Image production program for the Bell & Howell Microcomputer or the APPLE II computer. This powerful program is for up to 24 projectors and includes clock track synchronization, editing, filing, print out, status display, looping and automatic cue timing.

APPLE II COMPUTERS are ideal for the Audio Visual industry, they are distributed and serviced nationally, and have a huge range of proven computer software for a variety of applications many of which are of direct relevance to the AV user or producer. Best of all the reasonable price means that the SONIC

system is the best value in sophisticated Multi-Image programming today. For information contact: Electrosonic Systems, 5223 Edina Ind. Blvd., Mpls. MN 55435, 612-835-4787. In Canada: Multivision Electrosonic, 70 Richmond St., E., Toronto MC5 1NB, 416-368-1987.

TITLE: THE STICK
PUBLISHED BY: K & D ELECTRONICS

Born of frustration, this is a joystick using custom designed potentiometers and big soft buttons ("No holes in your finger after *Space Invaders"). Guaranteed.*
PRICE: $54.95

TITLE: TEKDIM INTERFACE CARD
PUBLISHED BY: ABW

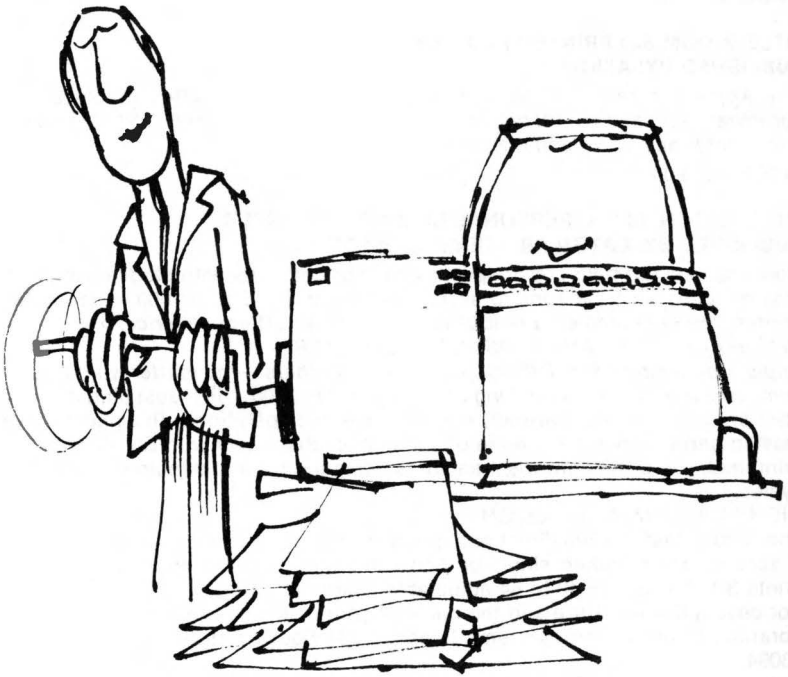
An economic alternative to the costly terminals that will enable users to interface with any software package that supports Tektronix graphics. Other products being offered are the Teksim Host Interface Card for use at rates above 300 Baud and the Hi-Plot Application Pak, disk based software that makes the Teksim Apple Interface with a Houston Instrument Hi-Plot Plotter to get Tektronix quality hard copy in color.

TITLE: VET/2 VOICE ENTRY TERMINALS
PUBLISHED BY: SCOTT INSTRUMENTS

Permits voice units to interface directly with any 48K Apple II computer. The enhancement gives the microcomputer truly integrated speech recognition capability for the first time.
Measuring only 1¼"' high by 8" wide by 10" deep, the VET/2 plugs into any slot in the Apple II and is like functionally to the keyboard for ease of use. The direct keyboard link allows the user to choose keyboard input or voice input at any time.
According to Brian Scott, president of the Denton, Texas-based firm, the new Apple peripheral allows the user to run Integer BASIC, AppleSoft and even machine-code programs by voice input with no modifications to the programs. "Users wanting to run their word processor programs with voice input can simply call the training routine, type the character, word or phrase they would like to enter by voice, say the word five times and return to the program. Thereafter, when the word is spoken the function is performed," Scott says.
The new VET/2 is the latest addition to the Scott line of voice entry terminals for microcomputers. A version announced early this year is available for interfacing with TRS-80 terminals.
The VET/2 is supplied with pre-processor, interface board, software (with demonstration programs), noise-cancelling headset microphone, and operator's manual. For more information contact Scott Instruments, 815 North Elm, Denton, TX, 76201; (817)387-9514.
PRICE: $895, FOB, Denton, TX.

PRINTERS

Anadex Model DP-8000AP Printer PT-1
Axiom 820 Printer/Plotter PT-1
Eaton 7000 + Personal Computer Printer PT-1
Epson MX-80 ..... PT-1
Epson TX-80 w/Graftrax PT-2
Paper Tiger 445 and 460 ..... PT-2
Printers PT-2
Silent Thermal Printer PT-4
Trendcom 100 Printer PT-5
Trendcom 200 Printer PT-5
Daisy Wheel Printer PT-6



TITLE: ANADEX MODEL DP-8000AP PRINTER
PUBLISHED BY: ANADEX INC.

The ANADEX MODEL DP-8000AP Alphanumeric Line Printer is a completely self contained printer ideally suited for integration into terminal applications or as a stand alone printer. The Centronics compatible interface option makes this printer compatible with Apple's CONTROLLER package. This interface provided in the DP-8000AP accepts data in a PARALLEL BIT, SERIAL CHARACTER, SYNCHRONOUS FORM.

General Specifications: 96 columns, 112 CPS nominal throughput; 84 lines per minute, bi-directional printing; sprocket feed; paper entry through bottom or rear; out of paper detector; 256 character buffer storage; skip over perforation control; double width printing; original plus 3 copies; on line/off line control; 7 x 7 dot matrix character font; 96 character set.

Requires Centronics Parallel Interface Card. Visit your Dealer to see our other models.

PRICE: $995.00

TITLE: AXIOM 820 PRINTER/PLOTTER
PUBLISHED BY: AXIOM

Any Apple II screen display can be printed, including Hi-Res graphics; upper/lower case; and 20, 40, or 80 characters per line. Uses special 5" aluminized paper. Interface and manual included.

PRICE: $895.00

TITLE: EATON 7000 + PERSONAL COMPUTER PRINTER
PUBLISHED BY: EATON PRINTER PRODUCTS

Now you can add hard copy capability to your computer with plug-in simplicity that matches up to any micro system. And with the Eaton 7000 + *dot-matrix printer, you get complete printout versatility at an affordable price.*

INTERFACES WITH ANY PERSONAL COMPUTER

Apple, Commodore Pet, TRS-80, Northstar and others — no matter what type of computer you hve or are thinking of buying, Eaton 7000 + fits. Just plug it in and start printing. You'll get virtually maintenance-free operation with a minimum of moving parts. And minimum life of 100 million characters with Eaton's newest printhead, while the print mechanism is designed for a minimum of 10 million cycles.

HIGH PERFORMANCE DESIGN

The 7000 + features uni-directional printing at a speed of 1.25 lines per second. It accepts any standard single or 2-ply roll paper from 3/4" to 3-7/8" wide and prints 3-1/3" line with 40 to 64 adjustable character capacity.

For descriptive literature and the name of your nearest dealer write Eaton Corporation, Count Control/Systems Division, 901 South 12th St., Watertown, WI 53094.

TITLE: EPSON MX-80
PUBLISHED BY: EPSON AMERICA

Bi-directional, logic seeking, dot matrix printer with a 9x9 matrix character formation. Characters can be enlarged, condensed, emphasized or double struck and full software control of horizontal & vertical tabs as well as form feed comes standard.

PRICE: 645.00

TITLE: EPSON TX-80 w/GRAFTRAX
PUBLISHED BY:

Full upper & lower case 125 DPS printer that will dump either APPLE hires screen in 2 sizes plus inverse or normal mode. Complete with software for the hires screen dump.

PRICE:
APPLE TYPE PARALLELS INTERFACE, ADD $88.00.

TITLE: PAPER TIGER 445 and 460
PUBLISHED BY: INTEGRAL DATA SYSTEMS, INC./IDS

Introducing the new Paper Tiger 445 with the most rugged printing mechanism ever put in a low-cost matrix printer.
The 445 comes with a reliable ballistic-type print head and an advanced cartridge ribbon that lasts four times longer than many cassette or spool ribbons. Two separate heavy duty motors drive the print head and advance the paper. Plus you get true tractor paper feed.
And the new 445 gives you the performance you expect from the Paper Tiger family of printers. You can software-select character sizes, print 80- and 132-column formats, adjust paper width and length, even generate six -part business forms. All at unidirectional print speeds to 198 characters per second. Need more stripes? Specify DotPlot a sophisticated raster graphics option.
If you've got an Apple, TRS-80 or other personal computer, get your paws on the tough new Paper Tiger 445 from IDS.
The people who invented low-cost matrix printing just growled.
PRICE: $795.00 See Dealer for 460 Price.

PRINTERS - A General List of Printers. See Dealer for details. Most of these will work on a wide variety of Microcomputers and cover price range from $600 -$3500.

Axiom EX-820 Microplotter, electrostatic printer/plotter with 80 columns per line, 128 dots per inch, 160 cps

Centronics 779 Printer with tractor feed, parallel interface, dot matrix, 132 columns, 64 character ASCII, 60 cps, receive only

Centronics 702 Printer with tractor feed, parallel interface, dot matrix, 132 columns, forms control, bi directional, 64 character ASCII, 120 cps, receive only

Centronics 761 Teleprinter with tractor feed, serial RS232 interface, dot matrix, 80 columns, bidirectional, 64 character ASCII, 60 cps, receive only
Centronics 730 Printer, 50 cps, 7X7 dot matrix, 80 columns per line, 96 character ASCII, friction feed, parallel interface.

Centronics 753-0 Printer, 100 cps, dot matrix, 132 columns per line, tractorfeed, bidirectional, 96 character ASCII, parallel interface

Comprint 912-P Printer, electrostatic, parallel interface, 80 columns, forms control, 9X12 dot matrix, 225 cps, 96 character ASC II, receive only

Comprint 912-S Printer, serial RS232 interface (other features same as 100-790-012)
Comprint 2K Character buffer plug in option

Diablo 1345 Printer, Hytype II, Daisy wheel, up to 158 columns, forms control, 96 character ASCII, 45 cps, parallel interface, receive only

Diablo 2300 Printer, matrix, up to 132 columns, forms control, bidirectional, 200 cps, tractor feed, RS232 serial, receive only

Diablo 1620-3 Printer, Daisy Wheel, tractor feed, up to 158 columns, forms control, 96 character ASCII, 45 cps, RS232 serial, send/receive

Diablo 1355WP Printer, metal daisy wheel, parallel interface, up to 158 columns, forms control, 88 character ASCII, 40 cps, receive only
Diablo 1640 Printer, Hytype II, receive only with metal daisy wheel

Diablo 1650, receive only with 220V/50Hz

Diablo 1650, send/receive

Diablo 1650, send/receive with 220V/50Hz

Diablo tractor feed option for Hytype II

Diablo dual cam pin feed platen option for Hytype II

Diablo Hyfeed, cut feeder

Diablo paper out detector switch for model 2300

Diablo Option board for 1650 RO

Diablo WP Enhancement Option to 1650

Heath WH14 Printer, 96 character ASCII, 5X7 dot matrix, 132 characters per line, 135 cps, serial RS232 interface from 110 to 9600 baud, pin feed

IDS IP125 Printer, 7X7 dot matrix, RS232 serial or parallel interface, 80 columns, 96 character ASCII, 165 cps, receive only

IDS IP125 Printer with P1210 option installed, selectable print densities, automatic linefeed, forms control

TI 765 Portable memory terminal, thermal dot matrix, RS232 serial, 80 columns, 64 character ASCII, 30 cps, 40K memory option and built in coupler

TI 810 Parallel interface option with character buffer

TI Printer Stand with stand mounted catch tray

NEC Spinwriter Model 5510-1, 55 cps, receive only, RS232 serial interface, 96 character ASCII, communications

NEC Spinwriter Model 5515-1, 55 cps, receive only, RS232 serial interface, 96 character ASCII, Diablo and Xerox compatability

NEC Verticle forms tractor for Models 5510 thru 5525

TI 810 Printer, vertical forms control, compressed print, stand and paper tray, receive only, 96 character ASCII, 150 cps, 132 columns, RS232 serial interface

TI 820 Printer, 96 character ASCII, 150 cps, 132 columns, vertical forms control, compressed print, send/receive

TITLE: SILENTYPE THERMAL PRINTER
PUBLISHED BY: APPLE COMPUTER INC.

The Apple Silentype is a quiet, versatile and compact thermal graphics printer. It offers increased flexibility over other printers — at a fraction of the cost — because the Silentype receives both its power and intellegence from your Apple computer. To the extent you can program your Apple, you can program the Silentype — whether you're using machine language, BASIC, or Apple Pascal. Or you can use the Silentype effectively without doing any programming at all. With a few simple keystrokes, you can change margins and line spacing, specify printing intensity, and print finely detailed charts and graphs.

The Apple Silentype, offering your programmable printing — and much more — at an affordable price.

The Apple Silentype ... offers you higher reliability than microprocessor-based printers, since its contains fewer components ... offers you more printing flexibility, because it has the capability of printing high resolution graphics ... may be used in an office or home environment without the need for a muffler, because it's quiet ... allows you to remotely access a large system, because it becomes a portable terminal when used with your Apple and a modem ... saves you time and money, because it requires no preventive maintenance, adjustments or lubrication .. eliminates the need for loading or writing a program to print a chart or graph exactly as it appears on the screen, because you can "dump" any hi-res screen directly to The Silentype.

Connecting the Apple Silentype to your Apple Computer System takes just minutes. Turn off your Apple, remove its cover, and plug the Silentype Interface Card into one of the expansion slots, typically Slot 1. Then simply plug the printer cable into the interface card, replace the cover, and turn on your Apple. When you're ready to print a file initialize the printer by typing "PR" and the slot number (for example, PR#1) and pressing the "return" key. Then type "List", press the "return" key once again, and the printer will do the rest. To disable the printer after printing a completed, type "PR#0". If the Silentype is under program control — for example, with Apple Writer — none of the above is necessary. The program will automatically engage and disengage the printer.)

Upper and lower case text is printed at up to 40 characters per second, 80 characters per line, high resolution graphics are printed at 60 dots per inch. The Silentype prints clear, readable copy on white paper — there's no hard to read, scratch susceptible aluminized paper required.

The Silentype paper path is short and straight, so you don't need to worry about paper jams. Paper is available in 80 ft. rolls, and — because the Silentype has no tractors — loading it into the printer takes just a minute. To alert you that reloading is necessary, a colored stripe along one edge signals the last few feet of the roll. While the printer cannot be damaged by running without paper, changing the roll when the stripe appears will ensure that you don't run out of paper in the middle of printing a file. Because the Silentype is a thermal printer, no ribbons — or messy ribbon changes — are required.

In addition to answering your printing needs, the Silentype — together with your Apple Computer and a moden — becomes a remote portable terminal. You can easily carry the system from one location to another and access your large system data base with just a phone call.

To use the Apple Silentype Printer, you will need: an Apple II or Apple II Plus, each with a minimum 16K of memory.

Text Mode
Print rate — Up to 40 characters/second, bidirectional
Line Length — 80 characters
Horizontal Spacing — 10 characters/inch, nominal
Vertical Spacing — 6 lines/inch, nominal
Line Feed Time — 65 milliseconds, nominal Character Format — upper and

lower case, 5x7
Graphics Mode:
Print rate — 240 columns of 7 dots each per second
Line Length — 480 dots
Horizontal Resolution — 60 dots/inch, nominal
Vertical Resolution — 60 dots/inch, nominal
Line Feed Time — 55 milliseconds, nominal
Interface:
Power Supply — From Apple computer via 9-conductor data/power interface cable
Interface — Custom synchronous serial
Interface cable — 9-conductor, 1.2 meters (3½ feet) nominal length
Paper:
Width — 21.6 cm (8½ in) nominal
Length — 24.4 m (80 ft) nominal
Technology — Thermal, low temperature: black image
Mechanical:
Dimensions — 19l.7 cm (7¾ in) x 31.1 cm (12¼ in) x 7.0 cm (2¾ in) nominal
Weight — 13.2 kg (6 pounds), excluding paper
Control Codes:
Full upper and lower case, 96 ASCII character set
Responds to ASCII codes for:
back space; linefeed; carriage return; form feed.
Special Control Codes include:
CTRL-Q (to print a hi-res page); CTRL-T (to turn the screen on or off); CTRL-F (to print contents of Silentype buffer); CTRL-C (to stop hi-res screen printing).
With your Silentype order, you will receive:
Silentype printer; Silentype Interface Card; One (1) roll of heat-sensitive paper (already installed in the Silentype printer); Silentype Operation and Reference Manual; A warranty card.

TITLE: TRENDCOM 100 PRINTER
PUBLISHED BY: TRENDCOM

Prints 40 columns in upper/lower case on 4" heat sensitive paper. Extremely quiet. Very reliable. Bi-directional printing at 40 characters (CPS), 6 lines per inch, using the ASCII 96 character set.

PRICE: $375.00

TITLE: TRENDCOM 200 PRINTER
PUBLISHED BY: TRENDCOM

TRENDCOM 200 prints 80 columns on 8-1/2" width heat sensitive paper. Hi-Res graphics software included for an extra $5.00 - on disk only.

PRICE: $595.00

TITLE: DAISY WHEEL PRINTER
PUBLISHED BY: APPLE COMPUTER INC.

The Qume Sprint 5 is a popular, fully-formed character, impact printer that produces documents of better than typewriter quality, at an average speed of 45 characters per second. Field-proven and highly reliable, it works with any Apple II, Apple II Plus, or Apple III computer system in applications ranging from word processing to business forecasting.

When used with the Apple III, the Qume Sprint 5 connects directly to the serial (RS-232) interface port on the system's rear panel. With an Apple II or Apple II Plus sytem, the printer plugs into a connector on the High-Speed Serial Interface Card (A2B0005), which is then installed in any unused expansion slot in the Apple.

The Qume Sprint 5 handles all kinds of documents, from form letters printed on letterhead, to financial statements up to 198 characters per line in length. The Qume Sprint 5 is the professional printer for professional-looking documents.

THE QUME SPRINT 5...

- Improves the quality and impact of your letters and documents, because its full-formed, highly readable characters give all your printed communications a thoroughly professional look...
- Increases office productivity, through letter-perfect, 45 character per second printing...
- Allows you to match type styles with your needs, because it provides a variety of available type fonts on easily interchanged printwheels...
- Increases printing reliability, thanks to its field-proven, highly dependable design and components...
- Interfaces quickly with your system, by plugging directly into the Apple III's back panel, or into a connector on the High-Speed Serial Interface Card for the Apple II or Apple II Plus.

PROGRAMMING AIDS

Amper-Sort II PA-1
Appilot PA-1
Apple (TM) Assembly Language Development System PA-1
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Utility Pak 1 ..... PA-49
Varlist PA-50
Vari-Print PA-50
Video/Print/List Controller PA-50
XRef/65 ..... PA-50



TITLE: AMPER-SORT II
PUBLISHED BY: PROGRAMMA INTERNATIONAL

AMPER-SORT II is a high-speed, machine language utility sort subroutine capable of sorting integer, floating point, and string arrays. Includes examples for interfacing with Applesoft.
ASSEMBLY/APPLESOFT (ROM or RAM). 32K.
PRICE: TAPE $15.92

TITLE: APPILOT
PUBLISHED BY: MUSE SOFTWARE
MEMORY: 32K
HARDWARE: INTEGER BASIC

An Apple II version of the standard Computer Assisted Instructional Language PILOT. Using lesson files written with the Appilot program editor, APPILOT creates a multi-media learning experience using text, graphics and sound. Appilot is a dialog-oriented language intergrating color graphics, a musical mini-language and disk commands for lesson segmentation that give an effective lesson size up to 100K. Designed for "Turnkey" operation, APPILOT includes a program editor, program interpretor and extensive on-line help lessons to instruct the user on all aspects of program development. A comprehensive user's manual explains all APPILOT commands and contains many illustrative example lessons.
PRICE: DISK, 49.95.

TITLE: APPLE (TM) ASSEMBLY LANGUAGE DEVELOPMENT SYSTEM
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Lutus) Enter the world of machine language programming with this brand new, winning, utility program. This very capable Assembler/Editor/Formatter allows you to write and modify your language programs quickly and easily. Features a cursor-based editor, local and global labels, and disk-based macros which permit you to incorporate frequently used subroutines into any program. Formprint program lets you print a formatted listing of source and object files.
PRICE: #04609, Apple II Disk Version

TITLE: APPLE-80
PUBLISHED BY: DAN McCREARY

Apple-80 is an 8080 simulator and debug package designed for the Apple II 6502-based computer. Any I6K or larger Apple II can run programs written for the 8080 and can be used as a design and debugging aid for the development of original 8080 software.APPLE-80 provides single-step, trace and run modes and executes all valid 8080 op-codes. Illegal op-codes are rejected. All 8080 registers are visible on the Apple screen and may be modified at will. 8080 I/O port addresses are arranged in a table for each of user modification. Up to 8 breakpoints may be set to facilitate program debugging.
PRICE: 20.00

TITLE: APPLEBUG
PUBLISHED BY: MICROP

APPLEBUG is a powerful programming aid and comprehensive software debugging tool that will assist in developing, debugging and testing machine language code on the APPLE II. APPLEBUG will also facilitate tracing the logic of existing machine language programs such as the monitor, DOS and

Applesoft. Since the Trace and Single Step functions have been deleted in the APPLE II Plus, APPLEBUG can be used to replace those functions. The APPLEBUG is intended for use with the microproducts/APPLE II based 6502 development system including Superkim (ICE) in-circuit emulator.

APPLEBUG has been designed to operate as a "stand-alone" debug package, or in conjuction with the microproducts 6-Character Label Editor Assembler. In either environment, all modes and options are available. However, entries by label name are only possible when APPLEBUG is used in conjunction with the microproducts Assembler and the associated Label Table is available. I/O management commands are included to facilitate the saving and /or loading the Label Table to or from disk or tape.

HOW A DEBUGGER WORKS

A debugger executes a program step by step and displays on the screen and/or prints the values contained in all the microprocessor registers as well as values contained in user selected memory locations (that may or may not be used by the program) for each instruction.

OPERATIONAL MODES

There are three Operation Modes: STEP, TRACE and RUN.

1. STEP will single step through a program and display the executed instructions and the associated registers.

In addition to displaying the instruction and registers, virtually an unlimited number of user specified memory locations may also be displayed. These locations may be specified as Hex locations or label names. In addition, breakpoint addresses may be specified.

2. TRACE will trace execution of a program and will display each executed instruction and the associated registers. This command will log each JSR and RTS instruction and the Trce will end when the final RTS is encountered or any key is depressed.

Y - Display all instructions, registers and memory locations.

j - Display only JSR, JMP, and/or RTS instructions, registers and memory locations.

N - Display no instructions, registers or memory locations. If while in the mode a user specified breakpoint is encountered, the breakpoint instruction will be displayed along with the associated registers.

S - Slow Trace. Delay between instruction display.

3. RUN will run a program with no instructions or registers displayed.

ALTERNATING BETWEEN APPLEBUG, ASSEMBLER ND DISASSEMBLER

The APPLEBUG, the microproducts/APPLE II Coresident Editor/Assembler and the microproducts/APPLE II Disassembler Text File Manager are all loaded into the same area of memory. (See Memory Map below). This means that a machine code program can be disassembled into a microproducts compatible text file and the Assembler can be loaded over the disassembler without disturbing the text file. You can then modify the code and assemble it followed by loading APPLEBUG over the Assembler without disturbing the text file or assembled code. You are now ready to complete the debugging process.

APPLE II MEMORY MAP

0800 - OFFF - Assembled programs

0111 - 36FF - Assembler/APPLEBUG/Disassembler (one at a time)

3700 - 95FF - Text file

9600 - BFFF - DOS

There are no tricks to prevent you from loading listing and making a backup copy of your Applebug.
PRICE: 29.95

TITLE: APPLE II 6-CHARACTER EDITOR/ASSEMBLER
PUBLISHED BY: MICROPRODUCTS

This Editor/Assembler follows most of the basic rules and conventions and uses the same opcodes as developed by MOS Technology for the 6502 microprocessor, which is used in the APPLE II. This assembler, however, is much more powerful than the Apple factory supplied assembler, and incorporates a powerful text editor.

This program has two pass implementation and incorporates a text editor. This assembler incorporates provisions for calling any printer driver from any location in memory; ROM, RAM, PROM, EPROM. It may operate with Microproducts PR-40 or Centronics 779 printer interface, or other printers and interfaces from this assembler to provide hard copy records of programs when desired. This assembler also directly supports the Microproducts EPROM programmer. This assembler assembles code at over 3000 lines per minute. The text editor operates in two entry modes; Data entry and Command Mode. 1) When data lines are entered a syntax check is performed on each input line before that line is stored in the text file. 2) In the Command Mode nineteen text editor commands are available: Delete portions of text record, Execute a DOS command, Select any increment for renumbering, Load previously saved text file from cassette, List text file, List any portion of text file, Initialize text file pointers prior to creation of new text file, Enter location of printer drive routine, Return to monitor, Renumber lines, Execute code without entering monitor, Save text file on cassette, Scan text file for certain label, Assemble data in text file, load text file from disk, Save text file on disk, Tab function, Concentrate text files, Restore text file pointers if destroyed.

The feature which permits the text to be saved on or loaded from magnetic tape or floppy disk, facilitates the exchange of programs amount Apple users allows them to modify programs they receive by loading the text file, with comments, into their computer. Stored in the text file with a line number are the labels of subroutines, spaces between labels, mnemonic instructions and labels for temporary storage register in ASCII form. Therefore, every entry from the keyboard plus whatever the assembler inserts in the text file is found in the text file in ASCII form.

After the user has completed the origination of the program in the text file, he merely types "ASM" and carriage return and the assembler searches the text file and checks for errors on the first pass. Some of the errors might be: invalid opcode, duplicate labels, undefined labels and branches out of range, etc. Any detected errors are immediately displayed in English along with the line number of the error. Errors may then be readily corrected by returning to the text editor mode. If there are no errors, the object code is inserted in memory in a form which can be executed by the APPLE II.

The assembler has 5 pseudo opcodes. Pseudo opcodes tell the assembler what to do; as opcodes tell the program what to do. Pseudo opcodes appear in the same column as the opcode mnemonics. Pseudo opcodes do not appear in the object code they only appear in the text file editor, but this program permits the information in the text editor to be saved in memory or printed out for future reference.

The assembler can assign a six character mnemonic label to memory locations used as temporary storage retisters or assign a six character mnemonic label to subroutines. The advantage here is that it is easier to remember a word related to what the subroutine does than to remember hexidecimal addresses for 20 or 30 subroutines or temporary storage registers. In addition to the memory aiding

advantage of the mnemonic labels, comments can be inserted in the text file to make the program more readable.
PRICE $29.95 Diskette

TITLE: APPLE - DOC
PUBLISHED BY: SOUTHEASTERN DATA SYSTEMS

An aid to the development and documentation of Applesoft programs. This 3 programs set includes:

VARDOC: Produces a list of every variable used in your program and all the lines each is used on. Screen and/or printer output can include optional descriptors of each variable. Program occupies 3.5 to 5.8K of memory depending on options.

LINEDOC: Produces a list of every line called by a GOTO, GOSUB etc., and all the lines each is called from. You are even alerted to calls to lines no longer in the listing. Optional descriptors for each line # (3.5 to 5.8K depending on options.)

REPLACE: Now you can easily rename any or all occurances of any variable in your programs. Even change variable types! Can also be used to replace constants or referenced line #'s a given set occurs on. This program is especially useful when appending routines with conflicting variable use. (4.5K)

No need to be confused ever again about which variable names you have or haven't used in a program. Changing or deleting a subroutine? Now you can be sure you're aware of every reference to that routine in the listing. You'll wonder how you ever wrote programs without APPLE-DOC!

PRICE: Cassette 9.95
Diskette 13.95

TITLE: APPLE FORTH 1.7
PUBLISHED BY: CAPTAIN SOFTWARE

The **Forth** System is an interactive, extensible and structured—programming language. With this **Forth** Interest Group (FIG)—compatible nucleus, the Apple-user can define his/her own operations and enter them as working components of the language. This allows the user to build a working library of unique functions, including the creation of new data types. Machine language programs, though rarely necessary, can be entered from the keyboard and are automatically-linked, ready to run immediately.

Apple **Forth** 1.7 includes self-documenting features: a screen-editor; a decompiler; and a utility package for software development.

It has its own built-in operating system. **Forth** is fast (commonly 10 times as fast as Integer Basic), and produces extremely compact object code.

Hardware recommended: 48K Apple or Apple Plus with one disk drive. Cap'n Software fully guarantees each **Forth** system sold. User hotline available. Full 100% credit update policy. Fully-documented, with user-notes included in the price of the system (issued from Time-To-Time).

Price $140.00

TITLE:APPLE FORTRAN
PUBLISHED BY: APPLE COMPUTER INC.

FORTRAN is a powerful programming language, especially suitable for work in mathematics, engineering and the sciences. Apple FORTRAN, usable with the Apple Language System, is the ANSI Standard Subset of the recently-defined FORTRAN 77 standard; in several areas, Apple FORTRAN contains enhanced features and capabilities.

Apple is providing FORTRAN for use by technical professionals and educators who are both familiar with the FORTRAN language and are using packages written in FORTRAN. Because FORTRAN is a well-established language, large libraries of FORTRAN programs are already in existence, particularly for engineering and scientific applications. Apple FORTRAN provides the sophisticated FORTRAN user with the capability to develop new and modify existing FORTRAN programs on an Apple. Apple does not recommend FORTRAN for the individual new to programming.

Apple FORTRAN ... offers enhanced features and capabilities because it supports the newest computer industry standard, ANSI X3.9-1978 ... provides a comprehensive software design environment including an editor, linker, file handler, assembler, Apple Pascal compiler, and system library, operating in the Apple Language System ... eliminates the need to recompile or reassemble existing code files when assembled machine code can be combined with a FORTRAN P-code file through the Apple Language System's linker facilities ... allows you to take full advantage of Apple's Hires graphics capabilities by interfacing to graphics routines in the system library ... gives programmers access to large libraries of material, since FORTRAN is a familiar, well-established language ... provides access to special Apple features, such as sound generation and control paddles, through its system library routines ... permits you to combine several source files in a single compilation through compiler directives in the source code.

First, Some Words About FORTRAN '77.

FORTRAN 77 contains significant additions and enhancements to the previous 1966 standard. For example, mixed-mode arithmetic expressions are allowed. Structured programming is supported through expanded IF statement constructs. Logical IF, Block IF, ELSE IF, ELSE, and END IF statements provide a vastly improved method of clearly and accurately specifying the flow of program control. CHARACTER data type replaced Hollerith; alphanumeric data can be represented as strings rather than array elements.

Some Specifics About Apple FORTRAN.

Apple FORTRAN is the ANSI Standard Subset FORTRAN 77. It also supports enhancements and facilities from the full FORTRAN 77 language. In particular:

Subscript expressions may include array elements and function calls.

DO statement limits may be defined by expressions, rather than just single variables.

I/O units may be specified by expressions, rather than just constants or simple variables.

The I/O list of a WRITE statement may include expressions.

All combinations for FORMATTED/UNFORMATTED and SEQUENTIAL/DIRECT files are allowed, with the following restrictions:

—BACKSPACT is supported only for files connected to the blocked devices; it is not supported for UNFORMATTED SEQUENTIAL files:

—DIRECT files must be connected to block devices.

Apple FORTRAN contains a number of enhancements beyond the full FORTRAN 77 specifications. In particular:

Compiler directives may be included in the source code. For instance, the $INCLUDE directive allows you to insert previously-developed code into your program without having to repeat the code. This is useful, for example, when you

are writing many subroutines which use the same COMMON block. You can write the COMMON block just once, and $INCLUDE it in every subroutine.
An additional parameter to the OPEN statement allows you to specify whether the file is blocked or unblocked.
There are two minor differences between the ANSI Standard Subset FORTRAN 77 and Apple FORTRAN. They are:
Subporgram names cannot be passed as parameters.
INTEGER and REAL data types have different storage requirements — two bytes for INTEGER, four bytes for REAL.
To use Apple FORTRAN, you will need:
Apple II or Apple II Plus, each with the Apple Language System;
Apple Disk II drive with controller*;
Video monitor or television.
*While a single drive system is adequate for very small programs, two drives are strongly recommended for ease of operation and more serious program development.
Apple FORTRAN is written in Pascal and produces P-code which runs in the Apple Pascal Operating System.
Diskettes:16 sector format.
The standard library of intrinsic functions supplied with Apple FORTRAN include:
INT, AINT, MOD, DIM, MINO, EXP, TAN, SINH, LLE, IFIX, ANINT, AMOD, MAXO, AMINO, ALOG, ASIN, COSH, LLT, REAL, NINT, ISIGN, AMAXO, MINI, ALOGIO, ACOS, TAHN, CHAR, FLOAT, IABS, SIGN, MAXI, AMINI, SIN, ATAN, LEG, EOF, ICHAR, ABS, IDIM, AMIXI, SQRT, COS, ATAN2, LGT.
With your Apple FORTRAN order, you will receive:
One (1) each copy of the two FORTRAN system diskettes;
Apple FORTRAN Language Reference Manual.



TITLE: APPLE PASCAL
PUBLISHED BY: APPLE COMPUTER INC.

Apple Pascal is a fully professional system development environment. It incorporates the UCSD Pascal™ Operating System (Version 2.1), with enhancements for color graphics, sound generation, and Apple's special input/output features. Because it offers a compiled language, the Pascal system allows programs to execute more quickly and to take up less space than they would in BASIC. The structured programming facilities and extensive data structures in Pascal make it the language to choose for large business, scientific, and educational programs.

Apple Pascal ... increases programmer productivity because it provides a total software development facility ... simplifies program design through Pascal's convenient structural mechanisms and rich variety of data types ... lowers development costs, as extended built-in error checking routines catch syntax, type and range errors ... lowers maintenance costs because Pascal's modular structure minimizes convoluted code which is difficult to understand and modify ... allows programs larger than available RAM to run, through the use of memory overlays ... allows documentation, as well as program source code, to be written and modified through the utilization of a powerful, easy-to-use editor ... supports Apple's special graphics and sound capabilities, plus control paddles, through system library routines ... is the most transportable of all languages: it allows access to large libraries of Pascal programs and provides the capability to run your own programs on most Pascal systems ... offers a performance increase of two to five times over equivalent BASIC programs.

Apple Pascal has been designed for the sophisticated programmer or computer science student. Its richness of data types, control functions, and powerful utility routines can dramatically improve a programmer's productivity on large projects. For this reason, Apple has selected Pascal as its standard system and applications development vehicle.

Why UCSD Pascal?

Since UCSD Pascal is recognized as the microcomputer industry standard, using it as a basis for Apple Pascal gives a programmer portability. Not only can a user access large libraries of Pascal programs already in existence, Apple Pascal programs can run with minimum conversion on most computer systems offering Pascal.

UCSD Pascal is more than a language: compiler, assembler, editor, linker, and file handler are integrated with a single, powerful system. This provides the user with a comprehensive set of software tools for optimal program development. Built-in procedures and functions enhance the string, byte, and I/O capabilities. Both 36-digit integers and 32-bit floating point are supported.

Why Apple Pascal?

Apple has taken advantage of all of UCSD Pascal's capabilities and can offer others as well. These include:

Easy access to Apple's human interface features: color graphics, speaker, control paddles, and keyboard; transcendental functions' faster disk response and transfer rates; extensive documentation.

To use the Apple Language System with Apple Pascal, you will need the following system:

Apple II or Apple II Plus, each with 48K of memory; Apple Disk II with controller*; (a maximum of six drives are supported). Video monitor or television.

*While a single drive system is adequate for very small programs, two drives are strongly recommended for ease of operation and more serious program development.

Diskettes: 16 sector format.

Editor: Editing functions include cursor control, test modification, formatting, searching and marking capabilities. The Editor offers:

Fast, screen-oriented editing for program development and text editing; 80-character lines (upper/lower case) available with external CRT terminal; 80-character lines supported in standard Apple using horizontal scrolling.

Editor Commands: Jump, page, write, find, insert, replace, delete, exchange, copy, zap, verify, quit, update, exit, return, adjust, margin set marker, set environment, auto-indent, filling, left margin, right margin, paragraph margin, command character and token default.

Compiler:

Pascal source text is translated into P-code.

A group of one or more source language procedures or functions can be compiled separately as a UNIT, allowing a large program to be subdividied into smaller, more manageable parts. Commonly used procedures and functions can be compiled once, stored in a library file, and accessed by other programs through the Linker.

EXTERNAL routes can be declared and are later linked into the host program by the Linker.

Compiler option specifications can be embedded in the source text to control listings, screen messages, range-checking, inclusion of separate source files, and other compiler parameters.

Compiler Options:

C - Following characters are placed directly into codefile.

G+ - Allows GOTO statements.

G— - Forbids GOTO statements.

I+ - Generates I/O checking code.

I— - No I/O checking.

Ifilename - Includes named source file in compilation.
L+ - Sends compiled listing to SYSTEM.LST.TEXT.
L— - Makes no compiled listing.
Lfilename - Sends compiled listing to named file.
P - Pages listing.
Q+ - Suppress screen messages.
Q— - Sends procedure names and line numbers to CONSOLE:
R+ - Generates range-checking code for array subscripts and variables.
R— - No range checking.
S+ - Puts compiler in swapping mode.
S+ + - Compiler does even more swapping.
S— - Non-swapping mode: entire Compiler in memory.
U+ - Compiles on user lex level.
U— - Compiles on system lex level.
Ufilename - Specifies name of library file for finding UNITs.
6502 Assembler:
Permits relocatable assembly language routines to be generated for linking to Pascal programs.
Supports parameterized macros.
Assembler Directives. Delimiting Directive for Routines: .PROC, .FUNC, .END.
Label Definitions and Space Allocation Directives: .ASCII, .BYTE, .BLOCK, .WORD, .EQU, .ORG, .ABSOLUTE, .INTERP.
Macro Facility Directives: .MACRO, .END.
Conditional Assembly Directives: .IF, .ELSE, .ENDC.
Pascal Host Communication Directives: .CONST, .PUBLIC, .PRIVATE.
External Preference Directives: .DEF, .REF.
Listing Control Directives: .LIST, .MACROLIST, .NOLIST, .NOMACROLIST, .PATCHLIST, .NOPATCHLIST, .PAGE, .TITLE.
File Directive: .INCLUDE.
Linker:
Combines compiled P-code or assembled machine code files into the system work file or another specified code file. This eliminates the need to recompile or reassemble existing code files when incoprorating them into a program.
Designates any procedure or function at the P-code level as a SEGMENT, which means that its code can be swapped in and out of memory.
Resolves references in compiled code to UNITS or EXTERNAL routines before program execution.
Filer:
Handles the tasks of transferring information, i.e., storing and retrieving data on disk, moving and deleting disk files, creating and modifying diskette directories. Reports the location of files on diskette and what devices and diskettes are available.
Filer Commands:
GET, SAVE, NEW, WHAT, VOLUMES, LIST DIRECTORY, EXTENDED DIRECTORY LIST, REMOVE, TRANSFER, DATE, PREFIX, BAD BLOCKS, KRUNCH, MAKE, ZERO, QUIT, XAMINE, CHANGE.
System Utilities Include:
Desk calculator — performs simple calculations: addition, subtraction, multiplication, division.
Disk formatter — prepares new disk for use with the Apple Pascal system.
System librarian — links separately compiled or assembled routines into a library file.
System Library Contains:
The "Turtlegraphics" code unit, which provides easy access to Apple's High Resolution color graphics routines. Functions and procedures permit the user to choose a color, move and turn the cursor, specify viewport boundaries, fill the viewport with color, copy an array of data to the screen from memory, write text

on the graphics screen, and interrogate the system regarding the state of the cursor and screen. It adds the following procedures and functions: INITTURTLE, TEXTMODE, GRAFMODE, VIEWPORT, PENCOLOR, PENMODE, SCREENCOLOR, FILLSCREEN, MOVETO, TURNTO, TURN, MOVE, TURTLEX, TURTLEY, TURTLEANG, SCREENBIT, DRAWBLOCK, WCHAR, WSTRING, CHARTYPE.
The "Apple Stuff" code unit, which contains routines to generate random numbers, interfaces with the control paddles, and generate sounds on the Apple's speaker. It adds the following procedures and functions:
RANDOM, RANDOMIZE, PADDLE, BUTTON, TTLOUT, NOTE, KEYPRESS.
The "Transcend" code unit, which contains transcendental functions useful for mathematical calculations. It adds the following procedures and functions:
SIN, COS, ATAN, EXP, LN, LOG, SQRT.
The following is a list of maximum size limitations in the current implementation of UCSD Pascal:
Maximum number of bytes of object code in a PROCEDURE or FUNCTION is 1200. Local variables in a PROCEDURE or FUNCTION can occupy a maximum of 16383 words of memory.
Maximum number of characters in a STRING variable is 255.
Maximum number of elements in a SET is 32 * 16 = 512.
Maximum number of SEGMENT PROCEDUREs and SEGMENT FUNCTIONs is 16. (Six are reserved for the Pascal system, ten are available for use by the user program.)
Maximum number of PROCEDUREs or FUNCTIONs within a segment is 127.

TITLE: APPLE PILOT
PUBLISHED BY: COOK COMPUTER COMPANY

This is a version of the computer assisted instruction author language, PILOT. APPLE PILOT may be used to write teaching materials for students of any age. All core instructions have been implemented as well as special graphics and sound commands. The 11 instructions are easily learned by children as young as 8 years old. A manual is provided along with three sample lessons in PILOT.
PRICE: disk **25.00**

TITLE: APPLE PLOT
PUBLISHED BY: APPLE COMPUTER INC.

The Apple Plot program allows you to use your Apple Computer System to create, revise, and print highly detailed charts and graphs quickly and easily. Any information, from sales and stock activities to caloric intake and miles per gallon, can be presented in a visually appealing, comprehensive bar, line or scatter chart.
The program allows you to specify each axis, update and change information, and label the charts exactly as you wish. If your monitor or television is color, graphs can be colored for differentiation and effect. With the Apple Graphics Tablet, you can further customize and graph with a company logo or other marking. Transparencies of finished graphs can be used for presentations; hard copy can be printed for reports and later analysis.
Apple Plot ... helps you understand numerical information by displaying it graphically ... offers the capability for displaying externally generated date, because it can be used with other data base programs ... saves countless hours of design and drawing time by producing a finished chart automatically — you need only provide data points and choose the format ... offers versatility in presenting material, because it provides six graph forms from which to choose ... allows data to be differentiated on the screen through your Apple's color

capability ... permits design of custom plots because the user controls every graph parameter ... provides for comparisons because two graphs can be displayed on the same axis, and each graph can contain up to 100 points.
It's easy to put Apple Plot to work. The program diskette contains sample data sets to help you learn to create custom plots. Following the step-by-step instructions in the Apple Plot manual, you can "chart" your way, selecting functions from the program's main menu.
Graph Format Selection — This Apple Plot option offers a choice of six graph formats for plotting up to two separate data sets in a single display. If you're plotting more than two, there is a special overlay capability which allows additional data sets to be placed on the same graph. You can also physically exchange the coordinate data of the two data sets automaticlly, as well as specify colors.
X-Axis and Y-Axis Parameters — These options let you specify the limits, resolution and labeling of the axes. Apple Plot will ask questions about the data (for example, Is This a Monthly Plot?), display a possible reply (called a "default" reply), and wait for you to either confirm its answer or type in a different one.
Data Entry and Editing — This option is used for entering the number of data points in a graph; specifying where they are to be placed; changing information if necessary; or displaying a list of the data points in the current data set.
Display Graph — This option actually produces the graph on the screen.
Save Data to Disk — There are two forms in which you can save Apple Plot data onto an Apple diskette; Data and Picture. Data saves the data points in both data sets, the selected graph format, and all of the X- and Y-axis parameters. Picture saves the Apple's high-resolution screen image of the most recently displayed graph (especially useful when other graphs have been overlayed).
Recall Data from Disk — Although there are only two ways to store Apple Plot data onto a diskette, there are three in which to recall it: Data, Data (Raw) and Picture. When you recall Data, Apple Plot will display all stored data; when you recall Data (Raw), it will provide only the data points (used for reading data generated by external programs.) Picture recall simply redraws a previously developed high resolution screen image, exactly as it looked when it was saved.
Clear for New Graph — Resets all parameters and data to begin a new graph.
Print the Graph — Provides hard copy printout of graphis when an Apple Silentype or Qume Sprint 5 is connected to your system.
Additionally, there's a special program on the Apple Plot diskette that allows you to use your stored charts and graphs in a "slide show" on your monitor or television screen. This unique capability is ideal both for reviewing different graphs and for making presentations without the need for hardcopy or other printed visuals.
To use Apple Plot, you will need:
Apple II (with Applesoft Firmware Card), or Apple II Plus, each with 48K of memory; or
Apple II with Apple Language System;
One Apple Disk II drive with controller (second drive optional);
A video monitor or television;
A compatible printer* (optional)
A printer controller card* (optional)
*Note: An Apple Computer System using Apple Plot works with the following printers and appropriate controller cards: Apple Silentype Printer Card: Silentype Interface Card (supplied with printer). Qume Sprint 5 Card: High Speed Serial Interface Card (Apple Product A2B0005) with P8-02 PROM.
With your Apple Plot order, you will receive: Two (2) Write-Protected Apple Plot diskette; Two (2) Non-Write Protected Apple Plot diskette; Apple Plot Instruction Manual.

TITLE: ##APPLEPRINT## USING™
PUBLISHED BY: MALIBU MICROCOMPUTING

Give your Apple a flexible print capability like the big machines! Format your output by simply using the print ### ##; variable, statement. *##APPLEPRINT##* USING is independent from and does not interfere with the normal Applesoft PRINT statement. Indispensable for financial and business programming. Will pay for itself in no time at all as you save hours of tedious effort formatting reports, lists, tables, etc. Complete instructions and example programs included. 32K, machine language for the Apple II Plus.

PRICE: $19.95

TITLE: APPLESOFT PROGRAMMER
PUBLISHED BY: JOHNNY APPLESEED SOFTWARE AND COMPANY

The APPLESOFT PROGRAMMER will professionally format your screen input and output, so all you have to do is the second part. For each of your inputs you can specify: Whether or not you want the cursor to flash. The maximum number of input characters. Default string or numeric values (entered by hitting RETURN). For numeric inputs you can specify numeric accuracy, if you want commas inserted, the column number for right justification and minimum and maximum values that can be entered.

The APPLESOFT PROGRAMMER will give you complete control over the screen positions of your inputs and outputs, contains lot's of audio and visual feedback and an error handling routine. Enter forbidden characters (comma's, colon's and quotation marks) and add single key commands to all your programs. CTRL-C: CATALOG. CTRL-D: all DONE. CTRL-E: ERROR in input's. ESC: RETURN to the main menu. CTRL-X: CANCEL the input line and return the default value. CTRL-P: PRINT any or all screen pages any time you want to (from 1 to 24 lines) including the catalog.

You can also use the APPLESOFT PROGRAMMER to develop your programs for commercial marketing. MAKE YOUR PROGRAMMING LIFE A LITTLE EASIER, AND YOUR PROGRAMS MORE PROFESSIONAL.

PRICE: DISKETTE: $49.95

TITLE: APPLESOFT UTILITY PROGRAMS
PUBLISHED BY: HADEN BOOK COMPANY
MEMORY: 16K

Contains 9 useful subroutines among them 3 different statement formatters: REM, PRINT, nad Poke writer. You can calculate the decimal address of your machine language program, get an exact byte and line count, renumber the program in any increment, check for illegal branches and indicate where one exists, get an approximation of the amount of time needed to renumber a program, and join two or more programs together. Also, you can control the speed at which listing scrolls, stop the scrolling, and restart the scrolling.

PRICE: TAPE, 29.95

TITLE: APPLESOFT II UTILITY I
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K, APPLESOFT

The Applesoft II Utility I program provides the user with the following features. Complete automatic renumbering of any Applesoft II program. The creation of an EXEC File for subroutine file creation. This feature allows the user to incorporate the same subroutine in various programs. No modification of the program in machine memory

(RAM). Automatic running of the program.
PRICE: Tape, $7.45
Disk, $12.45

TITLE: APPLICATION TEXT EDITOR
PUBLISHED BY: COMPUTER COMPONENTS, INC.
An upper and lower case text editor that runs in Applesoft II. Major commands are; insert a line, delete a line, change a line, list lines of text with numbers, print to printer, find a line, replace a line with a line, display memory, save and load text to and from tape, and exit the program.
PRICE: 50.00

TITLE: ASSEMBLER
PUBLISHED BY: POWERSOFT, INC.

The Assembler is a random Access Memory resident assembler. It was designed to provide ease of use required by the novice, while providing capabilities powerful enough for the expert. It facilitates the translation of symbolic language source programs into machine executable code.

The resulting object code may then be recorded to tape for future execution by th computer. The source code files read in by the assembler must have been created using the Powersoft FILE EDITOR program. In order to use this assembler, the user is expected to have a reasonable knowledge of the 6502 machine language and the hex numbering system.
PRICE: 24.95

TITLE: ASSEMBLY LANGUAGE DEVELOPMENT SYSEM
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.
The Apple Assembly Language Development System is an assembler/editor/formatter which includes a cursor-based editor, global and local labels and disk-based macros which allow incorporation on frequently used subroutines into any program.
PRICE: $39.95

TITLE: ASM/65 EDITOR ASSEMBLER
PUBLISHED BY: OPTIMIZED SYSTEMS SOFTWARE

ASM/65 is a powerful, 2 pass disk-based assembler for the Apple II Computer System. It is a compatible subset of the FORTRAN cross-assemblers which are available for the 6500 family of micro-processors. ASM/65 features many powerful capabilities, which are under direct control of the user. The PIE Text Editor co-resides with the ASM/65 Assembler to from a comprehensive development tool for the assembler language programmer. Following are some of the features available in the ASM/65 Editor Assembler:
PIE Text Editor Command Repetoire
Disk Based System
Decimal, Hexadecimal, Octal, & Binary Constants
ASCII Literal Constants
One to Six character long symbols
Location counter addressing"*"
Addition & Subtraction Operators in Expressions

High-Byte Selection Operator
Low-Byte Selection Operator
Source statements of the form: [label] [opcode] [operand] [comment]
56 valid addressing modes
Equate Directive
BYTE Directive to initialize memory locations
WORD Directive to initialize 16-bit words
PAGE Directive to control source listing
SKIP Directive to control source listing
OPT Directive to set select options
LINK Directive to chain multiple text files
Comments
Source listing with object code and source statements
Sorted symbol table listing
PRICE: DISK, 69.95

TITLE: BABBLE
PUBLISHED BY: THE SOFTWARE FACTORY

WHAT IS BABBLE?
In some ways BABBLE is a programming language like BASIC or PASCAL but, unlike these general purpose languages, BABBLE is highly specialized. "Programming" in BABBLE is much simpler than in BASIC, as you define the rules the computer will follow to create random or fixed patterns using language, music, or graphics. A BABBLE program can be as simple as a random sentence "babbler" or as complex as a meaningful prose generator. The only limitation is your imagination. Some of the things BABBLE can do are:
Complete a partially written story, "filling in the blanks" with words, either chosen at random from lists you specify, or obtained from the keyboard at execution time. The stories generated this way are often hilarious!
Construct random poetry and jingles from "building block" words and phrases, laid out in grammatical rules.
Generate random stories from small sections or sentence patters.
Create fixed or random graphic displays, block letters, and animation more concisely and easily than in BASIC.
Mix text, graphics, sound (and anything else you can think of through calls to your own assembly language subroutines).
WITH BABBLE YOU GET ...
A general purpose full screen EDITOR supporting both tape and DOS text files.
A COMPILER which translates your BABBLE code into high-speed interpretive code.
An EXECUTOR which interprets and executes your BABBLE programs.
Several EXAMPLE BABBLE PROGRAMS, creating stories, jingles, and graphics.
A complete MANUAL on the use of BABBLE with programming tips.
BABBLE is written entirely in 6502 machine language and requires a minimum of 16K on a tape based APPLE II or 32K on diskette based systems and the Integer Basic Rom.
PRICE: $15 on Cassette $20 on Diskette

TITLE: BASIC—BASIC
PUBLISHED BY: COMPUTER HOUSE DIV.

This program teaches the comptuer operator to write his or her own programs. Learn at your own speed.
PRICE: $23.00

TITLE: BASIC OPTIMIZER
PUBLISHED BY: BRUCE H. BARBER
MEMORY: 24K, 32K

Restructures your basic program by eliminating all remarks, condensing code to long strings, eliminating unneeded line numbers and renaming numeric variables. In effect, the Optimizer creates a production program. You will get a 10% to 40% increase in the speed of execution by running your program with all the remarks you need; give your variables meaningful names. After the program is done, let the Optimizer create a fast efficient production version. Integer Basic. By Bruce H. Barber.

PRICE: Cassette 19.95
25.95

TITLE: THE BASIC TEACHING PAC
PUBLISHED BY: CREATIVE SOFTWARE
MEMORY: 16K

Learn both of the Apple's BASIC languages with this 2 disk set. Better than 150K of program to take you from a beginner to an advance programmer.

PRICE: DISK, 42.00

TITLE: B-COPY
PUBLISHED BY: PYGMY PROGRAMMING

B-Copy is a binary file copying program for use with Apple-II disks. It works with either DOS 3.1 or 3.2 and will copy any binary file, except those which load in the top end of the available memory — (This is where the B-Copy program is running).

B-Copy will load the fill, tell you the beginning and ending memory locations then re-save the file to another disk.

PRICE: $19.95

TITLE: BROWNPAK 1
PUBLISHED BY: THE COMPUTER EMPORIUM

BROWNPAK 1 is a utility package for use with Applesoft BASIC in ROM. These routines include several machine-language programs which give your BASIC programs such things as PRINT USING capabilities, super fast mahine-language sorting (1000 string items AND a numeric array in 5 seconds), automatic diskette menu, packing & unpacking of numbers, HI-RES shape utility programs, and much more.
Programmers from novice to expert will find these extremely easy to implement utilities an indispensable aid.
BROWNPAK 1 is fully compatible with DOS 3.3 and comes with eleven utility routines on diskette, instruction manual, and quick-reference chart.
PRICE: $39.95

TITLE: CATALOG SORTER
PUBLISHED BY: HOWARD SOFTWARE SERVICE
MEMORY: 48K
HARDWARE: DISK DRIVE

CATALOG SORTER. . . .alphabetizes disk catalog and displayes contents by file type. Also identifies remaining space available on disk. (Written in

Machine Language for high speed and full compatability.
PRICE: DISK 39.00

TITLE: CHAR $ FUNCTION
PUBLISHED BY: PROGRAMMER SOFTWARE EXCHANGE
A progrmming aid which allows a means of generating character sets other than those available on the Apple jeyboard. 8K
PRICE: 2.00

TITLE: 6 CHARACTER DISSASSEMBLER AND TEXT FILE MANAGER
PUBLISHED BY: MICROP
Microproducts announces a powerful new two-pass Dissassembler/Text File Manager for the APPLE II microcomputer. This very useful programming tool disassembles any machine language program which resides in the APPLE II; such as, BASIC, the Disk Operating System and printer driver routines, etc., and creates a text file for the microproducts 6-Character Label Editor Assembler.
This dessassembler will be extremely valuable to any programmer who want to rewrite, debug, modify, analyze,and understand the workings, functions and operation of inadequately documented programs for which there is no source listing available.
The two-pass 6-Character Label Disassembler/Text File Manager creates labels, zero page usages and a symbol table. The labels are in the form of LXXXX where XXXX is the starting address of the subroutines or the address of the register used; be it zero page or otherwise, if the address of the label is outside the assembly range, an equate text record is created. Invalid instructions and unidentified opcodes are listed as data statements.
The Text File Manager portion of this program has the following features:
The Text File can be listed in toto
A rnge of line numbers can be listed
The start address of any printer driver routine can be specified
The Text File. or portions thereof, can be saved on cassette or disk (very useful in generating subroutines)
The Text File created starts at the same location as text files created by the microproducts 6-Character Label Assembler and is therefore completely compatible with that assembler.
Ther are no tricks to prevent you from loading, Listing and making a backup copy of your disassembler.
PRICE: 29.95

TITLE: CHARACTER EDIT PROGRAM
PUBLISHED BY: ECLECTIC RENTALS INC.
The Character Edit program is an integer Basic program for the Apple II computer that permits one to define a new set of characters to use with Superchip. Each character is represented as an 8 row by 7 column dot matrix. Character Edit displays the character in a greatly magnified format to facilitate pattern creation and alteration. It then saves the character patterns in the internal form required by Superchip.
PRICE: $19.95

TITLE: 6 CHARACTER LABEL EDITOR/ASSEMBLER
PUBLISHED BY: MICROP

An assembler with text editor immeasurably improves the user's ability to develop assembled language programs. It is approximately as easy to originate a machine language program with this assembler as it is to write a program in BASIC. Suppose it is necessary to add an instruction between previously written instructions. Without the assembler, it would be necessary to rewrite all of the instructions following the added instruction, in order to relocate them in order. If the following code consisted of a thousand instructions, the addition of that one would result in a tedious, time-consuming and frustrating experience. However, with this assembler, it merely requires inserting the new instruction with an intermediate line number and type "ASM" and a carriage return. This automatically relocates all successive codes. This convenient trick is performed by the text editor feature. This feature permits deletion and rearrangement as well as addition of instructions. When used in conjunction with our Disassembler/Text File Manager, it can insert portions of any text file into the main text file; thus providing features of a Macroassembler.

The assembler can assign a six character mnemonic label to memory locations used as temporary storage registers or assign a six character mnemonic label to remember a word related to what the subroutine does then to remember hexidecimal addresses for 20 or 30 subroutines or temporary storage registers. For instance: "STORE 1" subroutine stores something and "DELAY" subroutine causes a delay while "BUFFER" indicates a temporary storage register for buffer storage. In addition to the memory aiding advantage of the mnemonic labels, comments can be inserted in the text file to make the program more readable. Further, they can be relocated anywhere in the file. Further, by saving machine language programs recorded on audio cassets, or diskettes, in the text file format, they can be relocated anywhere in the end users memory as well as being read and understood much more easily. Another very useful function of the assembler tabulates and records all of the labels assigned by the user to temporary buffer storage or subroutines.

There are no tricks to prevent you from loading, listing and making a backup copy of your assembler.

The microproducts/APPLE II 6-CHARACTER EDITOR/ASSEMBLER follows most of the basic rules and conventions and uses the same opcodes as developed by MOS Technology for the 6502 microporcessor which is used in the APPLE II. This assembler, however, is much more powerful than the Apple factory supplied assembler, and incorporates powerful text editor.

FEATURES

The microproducts/APPLE II 6-CHARACTER EDITOR/ASSEMBLER is available on either APPLE II compatible cassette tape or floppy diskette with instructions. It has two pass implementation and incorporates a text editor. This assembler incorporates provisions for calling any printer drive from any location in memory; ROM, RAM, PROM, or EPROM. This assembler may operate with our APPLE II to the Centronics 779 printer interface, or other printers and interfaces to provide hard copy records of programs when desired. This assembler also directly supports the micorproducts/APPLE II EPROM Programmer.

This assembler assembles codes at over 3000 lines per minute. When data lines (line number followed by assembly instructions) are entered a syntax check is performed on each input line before that line is stored in the text file. Nineteen text editor commands are available: a) Delete portions of text record, b) Execute a DOS command, c) Select any increment for renumbering, d) Load previously saved text file from cassette, e) List text file, f) List any portion of text file, g) initialize text file pointers prior to creation of new text file, h) Enter location of printer driver routine, e) Return to monitor, j) Renumber lines, d) Execute code without entering monitor, l) Save text file on cassette, m) Scan text file for cer-

tain label, n) Assemble data in text file, o) Load text file from disk, p) Save text file on disk, q) Tab function, r) Concentrate text files, s) Restore text file pointers if destroyed.
After user has completed the origination of the program in the text file, he merely types "ASM" and a carriage return and the assembler searches the text file and checks for errors on the first pass. Some of the errors might be: Invalid opcode, duplicate labels, undefined labels and branches out of range, etc. Any detected errors are immediately displayed in English along with the line number of error. Errors may then be readily corrected by the text editor. If there are no errors, the object code is inserted in memory in a form which can be executed by APPLE II.
The assembler has 4 pseudo opcodes. 1) Originates the assembly of code at Hex addres HHHH. 2) Defines strings of either ASCII or Hex data. 3) Assigns a Hex address (zero or non-zero page) to a label. 4) Stores the Hex address of LABEL 2 in the next two positions.

PRICE: 29.95

TITLE: CLARITY PASCAL
PUBLISHED BY: PROGRAMMER INTERNATIONAL, INC.

Clarity Pascal is a high level language specifically designed for today's single-user limited-memory microprocessor-based computers. Clarity Tiny Pascal is a subset of Pascal inspired by Chung & Yuen's "Tiny Pascal Compiler" (byte 3(9), Sept. 1978). The compiler compiles the Pascal program into an intermediate P-code, which is then translated or interpreted on the host computer. Since only the P-code translator or interpreter changes from microprocessor to microprocessor, Clarity Pascal can be quickly and easily implemented on new computers. The P-code instruction set used by Clarity Pascal was designed by the guidelines in Tanenbaum's "Implications of Structured Programming for Machine Architecture" (Communications of the ACM 21 (3); Mar 1978). This article details the optimal instruction set for block-structured contour-modelled programming languages such as Pascal. By using this optimized P-code set, it was possible to shrink the Tiny Pascal compiler to its present size of 5K (about 5000 bytes), with a significant increase in speed. (Details of the P-code set may be obtained from Programma International.)
The purpose of a high-level language is to shield the user from boring or complicated details of program implementation and to allow him to design his progrm in a clear and structured fashion. However, programs written for a microprocessor environment sometimes need access to machine-level feature, such as a panel switch or monitor subroutine. Tiny Pascal has two extensions to handle such needs:
1. a built-in phantom array called MEM. The size of MEM is the entire address space of the computer. Reading to or writing from memory is specified by assigning to or from MEM. A: = MEM [1000 16] reads memory location 1000 16 into variable A.

2. subroutine calls may be made directly to absolute addresses. The Pascal contour is not affected. When the subroutine returns, the program continues normally. CALL 9000 16 transfers control to 9000 16.
Tiny Pascal is a one-pass compiler which assumes that both source code and P-code are in memory. To conserve memory requirements, the P-code may be generated on top of the source code. Tiny Pascal will work effectively in

environments where the only secondary memory storage is a cassette tape recorder. Tiny Pascal will compile short programs in a 16K memory space. Since the P-code interpreter only occupies about 2K (about 2000 bytes) during actual program run-time, Tiny Pascal can be used as a high level language for dedicated controller applications.
Clarity Tiny Pascal includes the standard flow of control constructs IF - THEN - ELSE, CASE expression OF - ELSE, WHILE - DO, REPEAT - UNTIL and FOR - TO/DOWNTO - DO. Procedures and functions are fully recursive. Hexadecimal constants are allowed and hexadecimal and decimal conversion input/output routines are provided.
Clarity Pascal is designed by Martin Tracy of Clarity Consultants and is available through Programma International.
PRICE:

TITLE: CLARITY PASCAL VERSION 1.0
PUBLISHED BY: PROGRAMMER INTERNATIONAL, INC.

Grammatically identical to Chung & Yuen's "Tiny Pascal Compiler" (Byte Sept. 1978), the compiler produces an optimized intermediate P-code set. Version 1.0 occupies about 5K (5000 bytes) of memory and will compile short programs in a 16K memory space, although a 32K memory space is recommended. Tiny Pascal is a sing-pass compiler and will work effectively with cassette-based computers. An editor is included which provides both line and intra-line editing. Version1.0 includes the standard flow of control constructs: IF - THEN - ELSE, CASE expression OF - ELSE, WHILE - SO, REPEAT - UNTIL and FOR - TO/DOWN TO - DO. Procedures and functions are fully recursive. Hexadecimal constant are allowed and hexadecimal and decimal conversion input/output routines are provided.
NOTE: Clarity Tiny Pascal compiles program into an intermediate P-code which is translated or interpreted on the host computer. This makes programs written in Tiny Pascal highly portable, including the compiler itself. The Apple II implementation of Tiny Pascal, for example, required only one man-month of programming effort. Programma International is interested in implementing Tiny Pascal on all popular microprocessors and will support such implementations on a royalty basis. Interested programmers should contact Programma International for the implementation manual and further details.
Clarity Pascal Version 2.0
Version 2.0 will include multi-dimensional arrays and procedure and function parameter "call by reference". Character manipulation will be enhanced. A complete disk-based operating system will be provided. The operating system, which will also work with cassettes, will be written in Tiny Pascal with subroutine calls to machine language input/output drivers. Version 2.0 is projected for Winter 79.
Clarity Pascal Version 3.0
Version 3.0 will include records, subscript lists and floating point and trigonometric functions. Program overlay (independent compilation) will also be provided. Version 3.0 is projected for Summer 80.

TITLE: CONTROL PROGRAM
PUBLISHED BY: OPTIMIZED SYSTEM SOFTWARE

Disk-based operating system package for the Apple II (R). The complete OSS package consists of CP/A (including a set of disk utility comands similar to those of the popular 8080-based CP/M (R)) together with fully compatible BASIC, Text Editor, Assembler and 6502 Debug Programs.
CP/A (Control Program Apple) is the console interface to a powerful operating system which provides the user with a device independent interface to physical and/or logical I/O devices. The I/O devices communicate with the operating system via OSS supplied and/or user written device handlers.
The OSS Disk File Manager Device Handler provides for both sequential and random data access along with file management function such as Rename, Erase, and Protect. Disk File names are of the "primary-seconday" type and may contain the wild card search characters "*" and "?".
The OSS Basic has been designed to take advantage of the power of the OSS operating system. A typical example of this is the statement: PRINT #1, "HELLO". The "HELLO" string may be sent ot the disk, a printer, a modem or any other device that has been opened as file #1. Program lines are checked for correct syntax as they are entered; while decimal floating point arithmetic, 32K character strings and long (128 character) variable names are some of the other features of OSS BASIC.
The OSS Text Editor is used primarily to develop program source for the OSS assembler; however, it may used to edit BASIC programs or any other text. The assmbler uses the MOS Technology defined 6502 mnemonics and operands. Assembler object code may be placed directly into memory, or may be sent to any available deivce. The debugger allows for interactive machine level debugging with command functions such as: Step, Trace, Dis-assemble, Memory Move, etc.

PRICE: ENTIRE PACKAGE, 89.95
CP/A with BASIC, 49.95
CP/A with EDITOR, ASSEMBLER and DEBUGGER, 49.95

TITLE: CO-RESIDENT ASSEMBLER
PUBLISHED BY: COMPUTER COMPONENTS, INC.

This is a two pass assembler with text editor. Features include save and load text file from magnetic tape, and sic pseudo op codes.

PRICE: Cassette 19.95
Disk 25.00

TITLE: CRAE
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

A fast co-resident Applesoft editor for Applesoft programmers. Now perform global changes & finds to anything in your Applesoft program. Quote (copy) a range of lines from one part of your program to another. A fully optimize stop-list command that lists your program to the screen with no spaces added and forty columns wide. Append Applesoft programs on disk to program in memory. For-

matted memory dump to aid debugging. Powerful renumber is five times faster than most available renumber routines. Auto line numbering. CRAE need be loaded only once and changes your Applesoft program right in memory. 48K Apple II or Plus & Applesoft ROM & disk.

TITLE: CRAE 2.0
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

A fast co-resident Applesoft Editor for Applesoft Programmers. Now perform global *changes & finds* to anything in your Applesoft program. Quote (copy) a range of lines from one part of your program to another. A fully optimized stop-list command that lists your program to the screen with no spaces added and forty columns wide. Append Applesoft programs on disk to program in memory. Formatted memory dump to aid debugging. Powerful renumber is five times faster than most available renumber routines. Auto line numbering. Crae need be loaded only once and changes your Applesoft program right in memory.
PRICE: $24.95

TITLE: DAKIN 5 12-IN-1 UTILITY KIT
PUBLISHED BY: DAKIN5 CORPORATION

Dakin5 Corporation, a Colorado software house, is making available to the public 12 utility programs on one 16 sector diskette, utilizing the new Apple DOS 3.3, which provides 23% more storage.
These menu-driven utilities will facilitate the development of your own microcomputer programs.
All of the Dakin5 Programming Aids 3.3 programs are also compatible with the Corvus Disk Drive system.
This 12-in-1 set of utility programs accomplishes the following:
THE LISTER sends BASIC programs to the printer to be listed, utilizing the full line capacity of the printer. Pagination and page headings, including program name and date, are also provided as additional options.
THE LINE CROSS REFERENCE produces a display or a printed listing of all lines referenced by GOTO, THEN, GOSUB, LIST or RUN statements in an Applesoft BASIC program. Cross-referencing of most programs is done in a few seconds. An option allows you to print only the line numbers referenced in GOSUB statements.
THE VARIABLE CROSS REFERENCE creates a display or a printed listing of all variable names used in an Applesoft BASIC program, showing all line numbers where a given variable name is used.
The PEEKER displays or prints either all or selected records from a text file.
The PATCHER allows you to display any sector of a given file or program, and then to update any data within that sector. Another option permits you to specify the sector you wish to update such as directory sectors and sectors occupied by DOS.
The COPIER copies absolutely ANY type of file or program on a normally formatted diskette from one diskette to another. The name of the program or file is the ONLY information needed.
The CALCULATOR adds, subtracts, multiplies and divides very large numbers using numeric string data. The Calculator subroutine (using twenty place accuracy) is written in Assembler code, and runs much faster than an equivalent BASIC subroutine.
The DISKETTE COPY is a diskette-to-diskette copy program that does more than just copy. First, the program verifies the input. Then it formats an output disk, copies each track, and checks that the output matches the input. Additional options allow you to either initialize a diskette without DOS, or to create a copy without DOS, thereby increasing storage by 32 sectors. You may even create a copy with a different volume number than the original.

The ARRAY EDITOR is a simple word processor that allows you to create, modify, print and save your own text or EXEC files.
The SCREEN PRINTER permits contents of the text screen to be sent to the printer at any time the keyboard is active (i.e. the cursor is visible). This Screen Printer program remains in effect until you press RESET or "reboot" the system.
The PROMPTER is a data entry subroutine that handles both string and numeric data. You have the option of using commas, decimal points and leading zeros with right-justified numerics. Alphanumeric data is left justified with trailing spaces added as required. With the Prompter you are also able to specify maximum field length to prevent overflow in both numeric and alphanumeric fields. You can even define your own set of valid characters.
The CRUNCHER removes REM statements and compresses codes in Applesoft programs. This will increase the speed of your programs; memory and disk space savings could be more than 45%.
Many of these utility programs have been developed and tested for in-house use while producing The Controller™ business package for Apple Computer Inc.
PRICE: $70.00

TITLE: DAN'S DISK UTILITIES
PUBLISHED BY: MICRO SOFTWARE SYSTEMS

The Dan's Disk Utility Program (DDU) allows the user to directly examine and/or modify data on any track and sector of a diskette.

This program can be used to:

- Enter patches to machine language programs on diskette.
- Recover a file that was accidently deleted.
- Determine correct file sizes.
- Examine text files to check program operation.

The use of the DDU obviously requires a working knowledge of file structures on the diskette. To assist in this, four pages of documentation are included giving some information on the Apple disk format in addition to the documentation describing the DDU program commands.

The DDU operates by bringing a 256 byte sector from the disk into memory where it can be examined, and changed if desired. It can then be written back out to the diskette, to the same sector that it came from, or if desired to any other sector on the diskette.

Files may be selected by name, and the file headers examined. Data read into memory from diskette may be searched for specific values, or disassembled.

Also included with the DDU is a program called "EXPUNGE." This program is used to remove the DOS off of a diskette, freeing up approximately 10K of disk space that could not otherwise be used.

This, of course, means that you will be unable to boot the system off of an Expunged diskette. The normal procedure is to use another diskette to boot and the Expunged diskettes for data storage.

PRICE: $24.95

TITLE: DATACOPE SINGLE DISK SORT
PUBLISHED BY: DATACOPE

AT LAST — THE SORT PROGRAM YOU HAVE BEEN LOOKING FOR!
Increase the data handling capabilities of your Apple manyfold, by simply utilizing Datacope's FAST Single Disk Sort in conjunction with your own programs. You will discover your files rearranging with lightning fast speed, in any order

you desire. Read further for the exciting answers to your sorting needs.

WHAT IS THE DATACOPE SINGLE DISK SORT?

It is a very fast disk file sorting program for the Apple II series of computers, designed to rearrange random-access text files. It will sort one file by up to 10 key fields simultaneously, with each field in either ascending or descending alphabetic or numeric order.

WHO USES THE DATACOPE SINGLE DISK SORT?

A regional magazine for their 25,000+ subscriber file, a church for their membership files, a TV station for special news feature research, a nuclear chemist, teachers, librarians, secretaries, OEM software suppliers, and many others.

WHEN IS THE DATACOPE SINGLE DISK SORT USED?

Whenever it is desirable to rearrange the order of the records in a file. For instance, let's say you have a mailing list of customers and you need to print lists in three different orders, one in order by name, another in order by account number, and a third in order by zip code, and name within each zip code area. The Datacope SDS will physically rearrange your mailing list file according to each separate requirement.

WHAT WILL IT DO FOR ME?

Your processing time will be speeded greatly, increasing the productivity of your computer. The throughput of our computer will increase greatly and you will be able to tackle larger tasks than before. And the one sort program will work for many different tasks.

WHAT ARE THE EQUIPMENT REQUIREMENTS?

The Apple II, Apple II Plus each with 32K or 48K RAM, or Apple Language System and at least one Disk II drive. More than one Disk II drive is permissible and 8" drives may be used with the Sorrento Valley Associates controller card. A version is available for the Corvus hard disk drive upon special order.

CAN IT BE MODIFIED INTO A TURNKEY SYSTEM?

Yes. The Datacope SDS is driven by an Applesoft BASIC program which can be modified for specific purposes. This BASIC Program passes the sort instructions to a machine-language program that uses all the available memory below DOS to sort the file. Upon completion of the sort it can execute a DOS command of your choosing and tie back into your program.

CAN THE DATACOPE SDS BE USED AS A SUBROUTINE?

It cannot be used as a subroutine, it must be employed as though it were a stand-alone Applesoft program. It will, however, execute any DOS command of your choosing upon completion of sorting. For example, you could run a program or invoke an executive file.

HOW MUCH MEMORY DOES IT REQUIRE?

The machine-language sort program uses all of the memory below DOS. Your Apple may have either 32K or 48K RAM; however, large files will sort much more quickly with a 48K machine.

DOES IT REQUIRE A SPECIAL FORMAT?

Yes. To be sorted, a file must be randomly accessible (i.e. opened to a fixed record length), and the sort keys must begin in a fixed location within each record.

MY FILE IS NOT IN THAT FORMAT. WHAT CAN I DO?

Datacope provides a special program on the Datacope SDS diskette called File Fixer, that will read any random-access file which was written using the method described in the DOS 3.2 manual, and write it back to the same diskette in one of three permissible styles.

MUST FILE FORMATS BE REDEFINED WITH EACH SORT?

No. The user has the option to save sort parameters to disk for later recall and use with the same file or file format.

HOW LARGE A FILE WILL IT SORT?

Up to a full diskette (one volume) of data in a single file. For example, on a 5¼ inch diskette, roughly 102,400 bytes, and on an 8 inch diskette, roughly 240,896

bytes. The Datacope SDS will not sort more than one file at a time, nor will it sort sequential files, perform merges, or perform an in-memory array sort.
YOU SAY IT IS FAST. JUST HOW FAST IS IT?
Astoundingly fast! For example, 500 40-byte records in 45 seconds, 1,000 40-byte records in 1 minute 30 seconds, or 200 100-byte records in 45 seconds. These are all worst-case times (i.e. the files were in reverse order). These times include reading the file, sorting it, and writing it back in the correct order.
WHAT DOES THE PACKAGE INCLUDE?
All of Datacope's software is recorded on high-quality 5¼" diskettes. Included is the diskette and a full-size comprehensive manual. The diskette has the Datacope Single Disk Sort program, a test file, test-file access programs, and the File Fixer program.
IS THERE A WARRANTY?
Yes. The Datacope Single Disk Sort is covered by a 90-day limited warranty. A copy of the warranty may be obtained by writing Datacope.
IS IT ON A PROTECTED DISKETTE?
Yes. All Datacope software is copyrighted and recorded on copy-protected diskettes. No attempt to copy should be made.
WHAT DO I DO ABOUT BACKUP?
You may purchase a backup unit when you return the serial numbered software registration card with proof of purchase. Datacope also offers quick replacement on warranty service.
PRICE: $49.95

TITLE: DESK UTILITY PACK
PUBLISHED BY: APPLE COMPUTERS
The Disk Utility Pack includes exciting new software for disk-based APPLEs, designed to make your programming life easier. . .
Disk Operating System (DOS)-With all the latest features
Update-Updates Existing Diskettes to current DOS and Preserves Their Contents
Applesoft CHAIN-links Applesoft programs together
Applesoft Renumber/Merge-Renumbers and merges Applesoft routines into a single program
DOS Manual-Over 170 pages of examples and detailed user information
Supplied with:
System Master Diskettes (Integer & Applesoft versions)
Blank Diskette
Manual
PRICE: 25.00

TITLE: DISASM/65
PUBLISHED BY: LAZER SYSTEMS
A LISA compatible disassembler for the Apple II or Apple II Plus. Disasm/65 generates a symbolic disassembled listing of a machine code program which can be reassembled using LISA 2.0 or LISA 1.5. Now LISA users can patch and/or modify systems such as DOS, Pascal, BASIC and the Apple monitor. Disasm/65 can also be used to relocate machine language programs.
Disasm/65 handles instructions, Hex data, string data, address data and stack address data. This allows the user to correctly disassemble any code segment. Disasm/65 lets the user imput the disassembly parameters, thus avoiding undefined instruction sequences encountered while using the mini-disassembler found in the Apple Monitor.
Requirements: 48K Apple II or Apple II Plus and Disk Drive.
PRICE: $24.95

TITLE: DISK ACCESS SUPERVISOR
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K, APPLESOFT

The DOS Supervisor is a unique system program that allows you to directly manipulate information stored on the disk.
Features have been incorporated into this program to allow the experienced user to have maximum flexibility in control over his DOS.
Functions of the program include the following items:
Read a track, sector
Write a track, sector
List to printer
List to screen
List in dump mode
List in dissassemble mode
Set a printer dump title and date
Print a disk catalog and/or free byte count.
PRICE: DISK, 14.95

TITLE: DISC COPY
PUBLISHED BY: SOFTSELL ASSOCIATES

For those Apple owners who have only one disc drive but would still like to copy discs that contain Integer Basic and Applesoft programs, this two-part program is a must. It results in an automatic system that can copy a whole discs worth or programs. Applesoft II Apple II Disc II
PRICE: 15.00

TITLE: DISC MANAGEMENT SYSTEM
PUBLISHED BY: SOFTTOUCH

Eight programs on disk to provide the user with a complete understanding of the disk drive commands plus a utility package to index and categorize all programs written for the Apple II computer. The system provides full search, editing and data transfer capabilities. A twenty-six page booklet provides detailed, educational techniques giving a thorough understanding of all DOS commands.
INCLUDED ARE SUCH TECHNIQUES AS:

- *Initialization of text files
- *Writing and reading of text files
- *Creating text files
- *Editing Files
- *Transfering data to other diskettes
- *Listing of data files
- *Searching data by various options.

A documented list provides line changes for adapting the system to perform numerous other applications. The booklet is written in a manner which may be used by the novice as well as the experienced programmer. Dozens of programming techniques are shown and fully documented. Also included separately, is a programmer's aid giving quick reference to Integer, Applesoft and DOS commands with illustrative examples. System requirements: Disk II & Applesoft tape or ROM card.
PRICE: 19.95

TITLE: DISK FIXER
MONITOR EXTENDER
PUBLISHED BY: IMAGE COMPUTER PRODUCTS

Disk Fixer provides experienced programmers with a complete tool kit for manipulating, repairing and protecting all data on 13 and 16 sector disks. Monitor Extender works with the Apple monitor and displays memory in hex, ASCII or binary.

TITLE: DISK MAGIC
PUBLISHED BY: PROGRAMMER INTERNATIONAL, INC.
MEMORY: 48K, INTEGER BASIC

This utility program allows the user to examine and modify diskettes created for the Apple II from the physical sector level and without the limitations imposed by standard DOS commands. It is possible to determine actual remaining disk space, release system space for program use, fix damaged files of all types, and restore some files that have been deleted. A comprehensive manual included.

PRICE: DISK, 24.95

TITLE: DISK-O-TAPE
PUBLISHED BY: DANN MCCREARY

Disk-O-Tape for the Apple II and Apple II Plus enables the user to transfer an entire disk's data to cassette tape and back again. It features comprehensive error detection and a true read-after-write verification pass.

PRICE: $12.00

TITLE: DOCU-PRINT
PUBLISHED BY: COMPUTER HOUSE DIV.

Prints anything on CRT out to printer. This is in basic and may be inserted in your program.

PRICE: $20.00

TITLE: DOS 3.3
PUBLISHED BY: APPLE COMPUTER INC.

DOS 3.3 is the handy housekeeper developed by Apple to help you take full advantage of your Disk II Floppy Disk Subsystem. DOS automatically keeps track of files, saves and retrieves information on a diskette, and performs a variety of other "housekeeping" chores. It dynamically allocates diskette space in a manner that's totally transparent to you, yet maximizes diskette capacity. DOS stands for Disk Operating System; 3.3 is the version update number. When you purchase an Apple Disk II with controller, you are buying an Apple floppy disk drive and DOS 3.3.

DOS 3.3 ... simplifies system start up by allowing for turnkey operation under Apple BASIC ... increases disk capacity by more than 20% over previous versions of DOS ... increases a system's capability by storing and retrieving information much more accurately, quickly, and conveniently than is possible with cassette tape ... adds to system efficiency by allowing you to access data by the name under which it is filed ... saves time spent searching for files because it automatically catalogs them by name and displays the complete catalog upon command ... provides the capability to save, load, run, rename, delete, and verify files quickly and easily through its variety of housekeeping commands ... allows rapid data retrieval through both sequential and random access to the data ... encourages good programming practices by allowing you to make back-up

copies of diskettes on a single disk drive system, rather than requiring two drives for the same purpose.

If you've purchased an Apple Disk II with DOS 3.3, only a few keystrokes are required to put the program to work for you. This process is called "booting" the disk and is explained in detail in the DOS manual.

If you are using a previous version of DOS and want to update your system to run DOS 3.3, you'll need the DOS 3.3 Kit to boost your disk capacity to accommodate the new version. The kit contains two PROMs which you will need to install. (If you are using the Apple Language System, you've already installed them).

The System Master diskette that comes with the DOS manual is a very special one: it allows you to copy an entire diskette, convert any diskette that has an earlier version of DOS, and much more. Programs that demonstrate various capabilities of DOS are also included on the diskette and discussed in the manual.

With approximately 20% more storage capacity per diskette made available by DOS 3.3, you can store even more files on each diskette. Just type SAVE and the file name, and DOS will save it for you.

So that you'll know exactly which programs you've stored to a particular diskette, DOS provides the CATALOG command. When you use it, a list of all the files contained on the diskette will appear on your screen. To access a particular program, simply type LOAD and its name, and within seconds, you'll be using the code you've selected.

DOS also lets you rename your files quickly and simply. To change the name of your telephone number file from PHONE NUMERS to FREQUENTLY CALLED NUMBERS, for example, just type RENAME PHONE NUMBERS, FREQUENTLY CALLED NUMBERS. Presto — you've got a new file name.

It's just as easy to delete an entire file as it is to rename it. Type DELETE and the file name, and it's gone.

Some files will be more important to you than others. To ensure their safety, DOS provides the LOCK command. To prevent your file from accidental erasure, simply type LOCK and the file name. If you decide later that you want to delete the file, just type UNLOCk and the file name. You can then use the DELETE command.

The DOS 3.3 package also includes some important utility programs for file and diskette maintenance and back-up. Once you become familiar with them, you'll find that they perform many chores that save you time and make your life easier.

DOS 3.3 is included with all Apple II Disk Drives (with controller)*. To use DOS 3.3 and its utilities, you will need the following system:

Apple II or Apple II Plus, each with minimum of 32K memory.

*If you are currently using a prior version of DOS, you'll need the extra PROMs supplied in the DOS 3.3 Kit before you can run DOS 3.3 (included in the Kit) on your system.

Housekeeping Commands:
INT, CATALOG, SAVE MAXFILES, LOAD, RUN, RENAME, DELETE, LOCK, UNLOCK, VERIFY, MON, NOMON.

Acccess Commands:
FP, INT, RE#, IN#, CHAIN.

Sequential Text File Commands:
OPEN, CLOSE, READ, WRITE, APPEND, POSITION, EXEC.

Random-Access Text File Commands:
OPEN, BYTE, CLOSE, READ, WRITE

Machine-Language File Commands:
BLOAD, BRUN, BSAVE.

DOS Messages:
DISK FULL, END OF DATA, FILE LOCKED, FILE NOT FOUND, FILE TYPE MISMATCH, I/O ERROR, LANGUAGE NOT AVAILABLE, NO BUFFERS

AVAILABLE, NOT DIRECT COMMAND, PROGRAM TOO LARGE, RANGE ERROR, SYNTAX ERROR, VOLUME MISMATCH, WRITE PROTECTED.
With your order for an Apple Disk II with controller, you will receive:
Apple Disk II with controller;
DOS 3.3 System Master diskette, including utility programs;
DOS Version 3.3 Instructional and Reference Manual;
BASICS diskette;
Blank distette.
With your order for the DOS 3.3 Kit, you will receive:
Two (2) 16 sector PROMs* (P5A and —6A)
IC puller;
DOS 3.3 System Master diskette, including utility programs;
DOS Version 3.3 Instrucional and Reference Manual;
BASICS diskette.
*If you are using the Apple Language System (which already contains these PROMs), the PROMs supplied with the DOS 3.3 Kit will be spares.

TITLE: DUMP RESTORE
PUBLISHED BY: SOFTAPE

With Dump-Restore you will be able to back up your disk files to cassette and restore them to disk. This allows you to relocate disk space for maximum efficiency and speed. The programs are saved and restored individually or the entire disk can be saved and restored.
PRICE: $14.95

TITLE: F.E.T. - RECOVER 4.0
PUBLISHED BY: COMPUTER HOUSE DIV.

File editing tools; examine data files, fix destroyed pointers, sectors may be read, modified, displayed or written, also files may be rechained. Contains the following commands: GET T-S (Get track & sector into buffer). PUT T-S (Put buffer back to track & sector). DISPLAY (Displays hex & characters of buffer). PRINT (Same as display only on printer). FIND F (Finds a file in the directory & places the first block of that file into the buffer, displays comment if not found). DRIVE 0/1 (Selects drive to be used for all subsequent commands). INIT (Initializes selected drive). MODIFY N-M (Modified bytes N to M in current buffer using ASCII code. Bytes are numbered 1 thru 256 & displayed by display or print commands above). HMODIFY N-M (Modify bytes N to M same as modify above, except uses hexadecimal instead of ASCII). CHAIN N (Chains ahead N blocks or to the end of file, whichever comes first. Uses pointer from block already in buffer for the starting point. Works with anything on the directory). HUNT (Finds beginning track & sector of all files in the directory).
PRICE: $65.00

TITLE: FILE EDITOR
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K

The File Editor is a machine language program which allows the programmer to create and maintain record files. Each record may be up to 80 characters long and has a line number which identifies it. With this program the user may create, enlarge, change, delete, resequence, and re-order records in a file. This File Editor program can also be used to create a source file for the Powersoft (Apple II) 6502 Assembler program.
PRICE: 24.95

TITLE: FILES
PUBLISHED BY: PROGRESSIVE SOFTWARE

Builds Serial Files, Changes Serial Files to random access Files, Adds to End of Serial Files, Record insertion and deletion anywhere in Serial File, Move individual records or blocks of records within Serial Files. A file manipulator.

PRICE: $49.95

TITLE: THE FLOATING POINT DICTIONARY
PUBLISHED BY: CDS
MEMORY: 16K

A teaching and reference program for Applesoft. For the beginner and advanced programmer.

PRICE: DISK, 39.95

TITLE: FORM-DS
PUBLISHED BY: DECISION SYSTEMS

FORM-DS is a system of programs and routines that assist in the entry, editing and display of data. Describe screen formats by simply typing them on the screen. Automatic range tests for input data. Display edited numeric values with commas inserted, etc. Dump the screen contents to a printer. Routines are easily incorporated into Applesoft programs. Documentation included. Requires: Disk, Applesoft (32K ROM).

PRICE: $25.00

TITLE: FORM-IT-OUT
PUBLISHED BY: SOFTAGON INCORPORATED

FORM-IT-OUT is a series of six individual routines in tutorial format appearing in both integer and Applesoft.
Included are: cursor positioning; cursor location; right justification; center justification; text windowing; error subroutines.
Each routine contains a description, its application to programming, an explanation of how it works, a sample program listing utilizing the routine, and a RUN of the sample program.

PRICE: DISK $19.95

TITLE: FORTE'
PUBLISHED BY: MAD HATTER SOFTWARE

An interpretive language devoted to playing music which allows the operator the same playing capabilities of the APPLE II in such a way, that does not require hours of tedious calculations and coding to play a few notes. With FORTE, all of the hard work has been done for you.
If the operator is familiar with the procedures used to write a BASIC program on the APPLE, using FORTE programs are easy to enter, list and edit.
FORTE can play music from either one of the two operator specified outputs. By using the appropriate command, the operator can play music from the Computer's speaker or from the casette output for recording on a high fidelity music system plugged into the output port. These programs are easily saved to disk or cassette and can be listed to a printer.
FORTE is fun for the beginner, yet capable of handling the veteran's most complex passages.
16K.

PRICE $19.95

TITLE: FORTH
PUBLISHED BY: PDI

A unique threaded language that is ideally suited for systems and applications programming on a micro-processor system. Programs written in FORTH are compact. The user may have the interactived FORTH Compiler/Interpreter system running stand-alone in 8K to 10K of RAM. The system also offers a built-in Incremental Assembler and a mini Text Editor as part of the above memory requirements. Since FORTH is a vocabulary based language, the user may tailor the system to resemble the needs and structure of any specific application.

The basic element of the FORTH system is termed a "word", which is comparable to a subroutine. When a word is referenced, it causes an action or a series of actions to be performed. Before the word can be executed, it must have been previously defined in the FORTH system's dictionary. The dictionary is a linked list of words containing each word's name and action. The Standard Vocabulary of the FORTH system comes with nearly 200 words in the dictionary.

Reverse Polish Notation (RPN) and Last-in First-Out LIFO) stacks are used in the FORTH system in order to process arithmetic expressions. Most FORTH words which operate on data accept their data from the stack, operate on the data, and push the result back on the stack. Therefore, arithmetic expressions are specified in RPN, with operands preceeding the operators.

Programming in FORTH consists of defining new words, which draw upon the existing vocabulary, and which in turn may be used to define even more complex applications. FORTH provides a facility for defining words, whose function is to define words.

Under normal operation, FORTH acquires its input for execution from the keyboard. All output is routed to the output list device. The system is usually idle and waiting for the user totype a complete line of words. When this is done, the system interprests the line, tries to execute the valid words, and then proceeds to prompt the user for more input.

FORTH may also take its input from a BLOCK I/O Buffer. The buffers are used to edit FORTH "screens" of text and to LOAD and SAVE the screens to auxiliary storage. Data in the buffers can be executed just as if it had all been keyed in at the keyboard.

One of the best advantages of FORTH over other programming languages is that software development times are cut in half or much more over assembly language programming. The programming in FORTH is entirely done in a structured manner, since there are no GOTOs.

FORTH SYSTEM ENVIRONMENT

10K of RAM Memory
256 Bytes to contain Input Buffer
1024 Bytes to contain Buffer 0

1024 Bytes to contain Buffer 1
256 Bytes to contain the Normal Stack
256 Bytes to contain the Return Stack
1 Input Device - Keyboard
1 Output Device CRT Screen
1 Auxiliary Storage Device - Cassette

The FORTH system is sold on a non-exclusive limited license basis for use on one (1) CPU by the original puchaser of the software. Purchase of the system includes a Reference Manual and the media containing the object code. Source code and source screens are available at additional cost.

The word "FORTH" is a trade-mark of FORTH INC.* Manhattan Beach, California. There is no connection between Programma International, Inc. and FORTH INC.

FORTH CONFIGUATONS

PRICE:

AppleFORTH Ver. 1.2	**34.95**
AppleFORTH Ver. 1.2 cassette	**34.95**
AppleFORTH Ver. 1.2 Disk	**49.95**

TITLE: FOURTH
PUBLISHED BY: PROGRAMMA INTERNATIONAL

FOURTH is a unique threaded language ideally suited for systems and applications programming on a microprocessor. system. Since this language is vocabulary based, the user may tailor the system to the needs and structure of a specific application. Programming in FOURTH consists of defining new words, based upon the existing vocabulary, which in turn may be used to define even more complex applications. System includes: standard vocabulary with 200 words, incremental assembler, structured programming constructs, text editor, block I/O buffers, cassette based system (if desired), user defined stacks,variable length stacks, user defined dictionary, logical dictionary limit, error detection, and buffered input.
INTEGER/ASSEMBLY. 32K.

PRICE: TAPE $34.95
DISK $49.95

TITLE: FORTH I
PUBLISHED BY: PROGRAM DESIGN, INC.

FORTH I is the creation of Wm Graves. This language gives you faster execution of programs than basic and is easier to program than machine language. Our 100 page manual will teach you everything you will need. FORTH I comes complete with demo programs on one APPLE diskette

PRICE: diskette 49.95

TITLE: FORTH II
PUBLISHED BY: SOFTAPE

Forth II is the creation of Wm. Graves. This language gives you faster execution of programs than basic and is easier to program than machine language. The 100 page manual will teach you everything you will need. FORTH II comes com-

plete with demo programs on one Apple diskette.
PRICE: $49.95 Diskette

TITLE: GAF UTILITY PAK I — 4 PROGRAMS.
PUBLISHED BY: PROGRESSIVE SOFTWARE

FILE COMPARE — compares 2 programs; reports differences to screen, printer, or disk file.
MENU — one keystroke program execution.
APPLESOFT & INTEGER SORTS — Super fast machine language sort for integer basic.
CONVERT-TO-TEXT — Turns applesoft and integer programs into TEXT files.
PRICE: $19.95

TITLE: GAF UTILITY PAK II — 3 PROGRAMS
PUBLISHED BY: PROGRESSIVE SOFTWARE

MULTIPLE DISK CATALOG — Creates master catalog list; can be processed by APPLE'S FILE CABINET. (File cabinet report files incl. for producing lists by volume, name, type or size.)
FILE CABINET FAST SORT — Improves File Cabinet Sort by factor of 10-20.
FILE COPY — Copies any type files from one disk to another.
PRICE: $19.95

TITLE: HAND HOLDING BASIC
PUBLISHED BY: APPLE COMPUTER INC.

Have you wanted to try programming in BASIC, but wished there was an easier and more effective way to learn? Hand Holding BASIC is for you.
A new, implementation of the ANSI 78 minimal BASIC interpreter for the Apple II, Hand Holding BASIC employs a dramatic, graphical approach to teaching programming and debugging in BASIC. As you write programs, Hand Holding BASIC not only checks your input character by character, but also signals errors and displays suggestions to correct them. And when you run a completed program, Hand Holding BASIC lets you use six special display screens to follow the computer's every step.
If you're just beginning to learn the BASIC language, Hand Holding BASIC will give you a clear understanding of how its commands, statements, and other features work together to form programs. If you already know the language, Hand Holding BASIC gives you a "play-by-play" view of your favorite programs, and helps improve both your programming and debugging abilities.
Hand Holding BASIC also: automatically checks your input, character by character ... so you save time locating mistakes and learning correct syntax; provides a complete, easy-to-use debugging environment ... so you learn how to debug programs even as you learn how to write them; uses special displays to monitor how your Apple interprets your BASIC programs ... so you spot awkward routines easier, and learn how to write more efficient programs.
Hand Holding BASIC has four distinct learning "levels" that let you learn BASIC in stages, and at your own pace. You choose the programming level you want. Level 1 encompasses arithmetic expressions only, and syntax checking restricts itself to your use of numbers, pluses and minuses, asterisks, obliques, left and right parentheses, and carriage returns. In Level 2, simple variables are added, along with the corresponding syntax checking abilities. Level 3 programming introduces powers and functions. And when you choose Level 4, ANSI Minimal BASIC becomes available to you—along with a complete syntax checking on all characters entered. Level 4 also automatically triggers display of a helpful selection array (which shows valid "next" characters), if you make two successive errors.

Hand Holding BASIC provides six special display screens that monitor programs as they run in your Apple. You control execution speed—which can be slowed all the way down to single step mode, and lets you switch back and forth between display screens.
A Command Screen is used to enter stored programs and commands, and an Execution Screen simply displays output from print statements in your program. The List Trace Screen shows control passing through your BASIC statements, while the chronological Trace Screen presents a scrolled display of source statements as they're being interpreted. A Monitor Screen shows the return stack, and displays monitored variables. And a For Loop Screen displays information about the interpretation of "FOR" and "NEXT" statements.
Hand Holding BASIC provides a sophisticated debugging environment, too. You're able to set or clear breakpoints on statements; to give cross reference listing for variables or line numbers; and to stop or restart at will.
To use Hand Holding BASIC, you'll need either: an Apple II Plus with 48K bytes RAM; or an Apple II with 48K bytes RAM; or an Apple II with 48K bytes RAM and the Apple Language System. Plus: Auto-Start ROM; a video monitor or television; and Apple Disk II with controller (16-sector PROMs).
With the Hand Holding BASIC package, you'll receive: 1) Hand Holding BASIC master diskette; 2) user instructions.
PRICE: $100.00

TITLE: HIRES ECHO
PUBLISHED BY: PROGRAMMER INTERNATIONAL, INC.
MEMORY: 24K, INTEGER BASIC
Similar to LORES ECHO, but with HIRES characters and your choice of either random or sequential ECHO, Sequential ECHO adds an additional number to the previous sequence each time you respond correctly. Random ECHO is similar except that a DIFFERENT string of numbers is used after every successful input.
PRICE: TAPE, 9.95

TITLE: INTEGER BASIC SUBROUTINES
PUBLISHED BY: CONTRIBUTED PROGRAMS
This subroutine package which is part of the Infinite Number of Monkeys program contains the following routines: 1) Automatic LOMEM and AUTO CLR Function, 2) Integer Basic CHR$(X) Function, 3) Pseudo-typewriter Auto formatting White print routine, 4) Text Page 1 to Text Page 2 memory move routine, 5) Page List program, 6) Illegal Statement Writer, 7) Integer Basic VAL(v) Function. 48K.
PRICE $4.00 Cassette $6.00 Diskette

TITLE: INTEGER CHR$ FUNCTION
PUBLISHED BY: CONTRIBUTED PROGRAMS
In Basic, the CHR$ function returns a character, given its numerical position in the list of ASCII characters. Many characters cannot be generated on the Apple II since its keyboard is upper-case only. Other characters, such as Control C., cannot be stored in a program since they have special functions in the system. Yet these characters are often necessary when controlling external devices, writing programs that write programs and in many other applications. This program gives you the same ability in Integer Basic that the CHR$ function delivers in Applesoft Basic.
PRICE: $4.00 Cassette $6.00 Diskette

TITLE: JOHN'S DEBUGGER RELEASE II
PUBLISHED BY: BRODERICK & ASSOC. PROFESSIONAL SOFTWARE HOUSE

Begin tracing or stepping from any point in your program.
Find next status equal zero condition

Now you can begin tracing or stepping from any point in your program. Just insert a 'JSR $9040' anywhere in your program and the debugger will be activated from this point on and you can use all the trace & step options. I use this for all of my HI-RES graphics work — it automatically turns graphics off and text on for the debugger.

The debugger places 3 "NOP"s over the JSR $9040 so tracing can follow your program logic flow. Enter a 'J' to put the JSR $9040 back in your program if you wish to debug again, otherwise, the JSR will not be there and you can test your progam again without debugging on.

Find next status equal zero condition. Enter'E' in the step mode and the processor will execute all instructions without debugging until it finds the status equal zero condition and then turn debugging control over to you again. This is a good way to move quickly through your program.

Now displays: BEFORE/AFTER in MEMORY $XXXX (Effective Address). Using labels are really not necessary anymore since the step move will now automatically display what is in every memory position which is referred to by every instruction both before and after execution. The memory effective address is computed and displayed for all addressing modes.

You will also notice that the debugger now loads from $8400 to $9600 instead of from $8600 to $9600. Everything else remains unchanged. Applesoft is not necessary for using John's Debugger unless you wish to use the labels. I myself never use them since BEFORE/AFTER displays more information than I need for debugging.

For machine & assembly language programmers (beginners & advanced) PERFORMS FUNCTIONS: TRACE, STEP, BREAKPOINT

I am happy to announce the release of "JOHN'S DEBUGGER" which is a 4000 byte machine language program which will step or trace through any machine language instruction located anywhere in memory. The trace and step modes can be used interchangeably while debugging.

The trace mode will follow the logic path instruction by instruction displaying the effective address, the opcode, and the dissassembled opcode — all logic changes are noted by skipping spaces. Tracing can be by line, by page or continuous and can also be printed if you wish.

During tracing you can enter the step mode where the debugger displays all registers, status and pointer plus the accumulator in binary, the last eight bytes pushed onto the stack, an easy to glance at display of all flags set, and a display window into 12 memory positions with labels which can be set up with up to 8 characters long for each label.

Both modes trace and step allow the temporary pause in execution so memory can be examined or changed and then return to continue with processing.

Incorporated in JOHN'S DEBUGGER is an excellent breakpoint program which when activated (JSR breakpoint) will display all of the same information that is displayed in the step mode. The breakpoint program has an easy to use timing delay routine which can slow up processing from 0.1 to 200 seconds and can be set with three options depending on how the delay routine is used. Breakpoint can be activated by break on keypress, cycle counter, always break or never break. All three modes save and restore the entire page of the stack.

TITLE: KRAM
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Keyed Random Access Method. Modeled after system used on IBM Virtual Storage mainframes. 6502 machine language program provides ultra-fast keyed

retrieval/storage of data in either direct or sequential mode, by either full or partial key values. 16-32K.
PRICE: $79.95

TITLE: LINKER
PUBLISHED BY: THE SOFTWARE FACTORY

Professional systems programmers use linkage editors, along with editors, assemblers, and compilers, as one of their most important development tools, LINKER is a linking loader/editor for the APPLE II with DISK II. It may be used with virtually any 6502 assembler now on the market to turn your APPLE into a powerful and productive development machine, rivaling the much more expensive LSI-11 or S100 bus based systems.
WHAT DOES LINKER DO? Dynamically LOADS AND RELOCATES your assembly language programs anywhere in RAM. COMBINES A MAIN PROGRAM WITH SUBROUTINES to form a composite, executable program, allowing you to assemble a subroutine once and then use it in as many programs as you wish. PRODUCES A MAP of all loaded routines, giving their location and the total length of the resulting module. AUTOMATICALLY LOADS each subroutine as it is needed. Will SEARCH MORE THAN ONE DISKETTE for subroutines if desire. LOADS either UP from an address OR DOWN from an upper boundary. ROUTINES are either PACKED together OR forced to EVEN PAGE ALIGNMENT at your option. Can be called as a soubroutine itself to LOAD PROGRAMS DURING EXECUTION and MANAGE OVERPLAYS. Comes with a starter LIBRARY OF SUBROUTINES including: print text strings, multiply, divide, format numbers for printing, convert an ASCII number to binary, delay in tenths of seconds, tone generator, random number generator, exit to BASIC, complete DOS text file access (OPEN, CLOSE, POSN, READ, WRITE)
Plus documentation on their calling conventions and an example program showing how to use them.
EXPERIENCED ASSEMBLY LANGUAGE PROGRAMMERS
LINKER is an invaluable aid to the professional. No more "partitioning" of memory for each routine. No more JMP vectors. No more reassembly of every part of a program to make one change.
NOVICE MACHINE LANGUAGE PROGRAMMERS
With LINKER's subroutine library you can learn assembly language by writing programs almost as easily as in BASIC.
PRICE: $49.95 on Diskette

TITLE: LISA, (INTERACTIVE ASSEMBLER)
PUBLISHED BY: DARRELLS APPLESOFT, INC.
MEMORY: 48K

LISA is a totally new concept in assembly language programming. Being fully interactive, all syntax/addressing mode checks occur as the source code is entered into the system! All error messages are displayed in plain, easy to understand English ... not just Error Codes! Commands in LISA are structured very close to those used by the APPLE II Integer Basic; i.e. LIST, DELETE, INSERT, PR//n, IN//n, SAVE, LOAD, APPEND, ASM, NEW and a special "user definable" key envisioned for use with "dumb" peripherals.
LISA uses extensive code compression techniques and as a result a 1000 line text file requires only about 8K of memory! For those programs which are too long to be held in memory, LISA operates in a disk-mode that allows you to assemble files which are larger than the physical memory of the computer. Likewise, the object code that is generated can be stored on a disk, hence, object files of any length can be generated.

LISA is very fast; i.e. a 1000 line program typically requires 3 seconds to assemble (assuming the listing option is off, of course). During the assembly process, the user may stop the listing to inspect the generated code by depressing the space bar ... the assembly will continue upon depressing the space bar again.
Some of the features that are available in the LISA Interactive Assembler are:
Disk Based System
ASCII Literal Constants (w/High Order Bit set/reset)
One to six character labels
Location Counter Addressing "*"
Addition/Subtraction operators in expressions
High-order byte selection
Low-order byte selection
61 valid machine Op-Codes including BGE, BLT, BTR, BFL, and XOR
SWEET-16 Op-Codes supported
All valid addressing modes
Automatic Zero-Page Addressing
13 Valid pseduo operators including:
NLS - No listing/Error only
LST - Listing on
EQU - Equate to Page Zero
ORG - Origin
OBJ - Object
ADR - Address
HEX - HEX String
ASC - ASCII String
STR - String w/length byte
END - End of source code
ICL - Include chains text files
DCM - Disk Commands
LISA supports upper and lower case in the event the user has the proper hardware modification. The special characters "]", "_", "","", etc. are directly available from the keyboard. Full Apple text editing is incorporated using control keys instead of the "ESC" sequence.

PRICE: DISK, 34.95
41 Page Documentation Manual

TITLE: LITTLE TRICKS
PUBLISHED BY: SOFTAGON INCORPORATED

LITTLE TRICKS is a series of tutorials on programming techniques for the advanced beginning programmer.
How to: round a number to the nearest hundredth place; make the program know when a certain key is pressed; set and use flags; simple sorting technique; solve equations by successive approximation (iterative solution) AND MUCH, MUCH MORE!!
Twelve routines in Applesoft — Seven routines in Integer.
Each routine contains a description, it's application to programming, an explanation of how it works, a sample program listing utilizing the routine, and a RUN of the sample program.
PRICE: DISK $19.95

TITLE: 6502 MACRO ASSEMBLER
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Extremely versatile. Generates relocatable code. Text editor. Many handy utilities. Comes on cassette but contains everything needed for disk use. 16-32K.
PRICE: $50.00

TITLE: MARCO ASSEMBLER TEXT EDITOR
PUBLISHED BY: C.W. MOSER
MEMORY: 16K

Disks may be used in lieu of cassette decks. Combined assembler and text editor software (2000-3FFF) which has the following features; Marco and Conditionally Assembly support; binary, hex and decimal constants; labels up to 10 characters; loads/records and appends from tape; string search and/or vector to disks; syntax - similar to MOS Technology specs. Over 25 commands, 22 pseudo ops, and 5 conditional assembly operators.

PRICE: 35.00

TITLE: 6502 MACRO ASSEMBLER/TEXT EDITOR
PUBLISHED BY: EASTERN HOUSE SOFTWARE
MEMORY: 8K

GENERAL:
Written entirely in machine language - not in basic like some we know of. Thus you get very fast and accurate assemblies.
36 error codes, 26 commands, 22 pseudo ops
Macro and conditional assembly capability
Creates relocatable object code on tape or executable code in memory
Vectors and special commands for use with disc operating systems
Each user is assigned a serial number for future reference and for updating.
TEXT EDITOR FEATURES:
Auto line numbering for easy source entry
String search command (>EDIT)
String search and replace command (>EDIT)
String search and conditionally replace by stepping thru file and prompting user for determination of replacement (>EDIT)
Commands to copy and move one or more source lines (>COPY, >MOVE)
Duplicate command for duplicating and updating source lines (>DUPLICATE)
Renumber source file command (>NUMBER)
Command to delete one or more lines (>DELETE)
Load and record commands (>GET, >PUT)
Source files can also be appended to current file (>GET APPEND)
Each source file loaded results in a status summary consisting of length in bytes plus the address range where loaded
ASSEMBLER FEATURES:
Labels unique up to 10 characters. Labels may be made up of the following:
A-Z 0-9 Plus 12 other characters
Label expressions may be netered. EX: LDA Table-Index«1
Hex Decimal, Binary Constants and ASCII Strings may be stored
EX: .BY 'THIS IS TEXT STRING'
BY %1101 $F3 49 'ABC' MASKBYTE
Can specify Hi or Lo part of label
EX: LDA #H, Op. Table; Load Hi Part of op. table
LDA #L, Value; Load Lo part of Value
Free format input. Simply separate fileds with one or more spaces and the fields will be automatically tabulated.
Conditional assembly operators: IFE, IFN, IFP, IFM, SET
Macro capability via .MD pseudo of (MACRO DEFINITION)

Non-repeating label capability for macros
Macros can be nested
Conditional assembly can be incorporated within the macros
Capability to store executable object code in memory and/or output relocatable object to tape during assembly
Assembler can store object code in memory at a different address from it execution address if desired (via .MC pseudo op) This is useful if object is to execute in memory space occupied by assm/ted.
Can assemble source from memory or, for long programs, from tape or disc
Complete listing can be generated during assembly (>ASSEM LIST)
or an errors only listing can be generated. Three ways to generate an errors only assembly: VIA ASSM NOLIST COMMAND
VIA .LC PSEUDO OP
VIA CONTROL O (O) WHEN OUTPUTTING
Command to output only the symbol table
OPERATING FEATURES:
Commads may be abbreviated to first 2 characters
Commands, Pseudo Ops, and Conditionals may be entered as upper or lower case characters.
Except for Pet Version (Because pet uses these for graphics), most control codes are dsiplayed as C where C is the character that would be displayed if Hex 40 was added to the code.
EX: CONTROL C = C, CONTROL X = X, ETC.
Machine language programs can be exectuted via run command
User command for user created functions (>USER)
Upper and Lower boundaries for Text File and Symbol Table assume a default size on Cold Entry, but can be changed or displayed via set command
PRICE: DISK or TAPE, 49.95

TITLE: MACRO-SCED
PUBLISHED BY: COMPUTER STATIONS, INC.

MACRO—SCED is a cursor oriented screen editing tool for the novice as well as for the serious programmer. In fact, any one who types in any program at all, whether copying from books or writing his own, cannot afford to be without it. It's a great time saver. Editing BASIC programs actually becomes fun. MACRO-SCED is easy to use and yet it has features found previously only on expensive terminals. Commands are executed through CONTROL character. It works in Integer Basic or Applesoft (ROM or RAM) and in monitor. This machine Language program is completely transparent to the user and only uses 1.5K of memory. Basic activation programs and a macro building programs are provided.
FEATURES: Character or Line insertion and deletion. Copy an entire screen-line with a single 'CTRL' key. Complete listing (all screen output) controls including stop-, slow-, page-, and end-list.
User defined keyboard Macros. Two key sequence to type or execute often used Basic/DOS commands, phrases or statements. (up to 56 Macros in two tables).
Special screen content saving feature, up to 35 screens limited only by free memory.
Screen-writer and screen dump to printer subroutines plus more editing aids; displaying the input buffer before hitting return, inverse block cursor to ease eye strain, etc.
PRICE: $39.95

TITLE: MASTER CATALOG
PUBLISHED BY: ALAN G. HILL
MEMORY: 32K

MASTER CATALOG Creates a single alphabetized file and listing of each diskette catalog entry by program name, volume number, and program type. MASTER CATALOG will help you locate your programs. A machine language sort will speed the sort by program name or volume number. 32K Applesoft II and machine language. Includes cassette and instructions.
PRICE: 8.00

TITLE: MCAT

MCAT is a binary progaram which creates a master catalog report. The first list is sorted by file names and the second by volume number with sectors used indicated. Provisions for duplicate volume numbers. 600 file names capacity on 48K system. 200 for a 32K system.
CRAE/MCAT Manuals include Instructions for Making A Backup Copy.
PRICE: $19.95, CRAE on Disk With 16 Page Manual
$14.95, MCAT on Disk With 10 Page Manual
$29.95, CRAE And MCAT On One Disk With Manuals
$2, One Manual; $3, Both Manuals

TITLE: MCAT
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

MCAT 2.0 is a fast binary utility which creates a sorted master catalog which is saved on disk as a binary file (Fast). The master catalog can be easily updated a whole diskette at a time (Add, Delete, Replace), List/Print have global search capability and one or two columns. Provisions for duplicate volume numbers. Approximately 1200 file names.
32K - 48K.
PRICE $19.95

TITLE: MEMORY DUMP
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K

Memory Dump is a relocatable machine language utility program. The program augments the Apple]! memory display. Any location in memory can be displayed in both ASCII characters and "hex", allowing the user to read data in memory in recognizable character and machine configuration.
PRICE: TAPE, 7.45

TITLE: MEMORY TEST
PUBLISHED BY: COMPUTER COMPONENTS, INC.

This program writes data to each location defined by the user, reads it back, compares it, and prints the bad memory location.
PRICE: 7.50

TITLE: MEMORY VERIFY
PUBLISHED BY: RAINBOW COMPUTING INC.
MEMORY: 16K

A diagnostic routine that checks a given range of memory, indicating any addresses found to be faulty, as well as the data that was placed in the memory cell, and the faulty data read back.

PRICE: TAPE $ 5.00
DISK $10.00

TITLE: MENU ASSORTMENT
PUBLISHED BY: WALLACE ELECTRONICS
MEMORY: 16K
Menu Assortment is a group of programs that allow you to run any disk program by a simple touch of a key. The programs include a short menu, a numeric menu and an alpha menu. The programs are easy to use and only requires one step to add a new program to the disk menu. 16K BASIC

PRICE: 6.95

TITLE: MODIFIER
PUBLISHED BY: AGENT COMPUTER SERVICES
The Controller Package is GREAT! But - do all your customers really want a 779 printer? Until now, the Controller has been locked into the Centronics 779 not any more!
Now you can sell your customer the printer he really wants, or sell the Controller to customers who already own another printer. All you need is THE MODIFIER from Agent Computer Services.
Simple to use, and completely automatic. Just boot the disk, and insert Controller Disks as requested. In about 15 minutes, you can have the Controller working on Qume, Diablo, NEC, Okidata - or any other printer.
There are no special procedures required by the customer. All documentation remains the same. Disks may be remodified to another printer at any time.
Don't miss out on this chance to increase Apple & Printer sales.
PRICE:

TITLE: ON-GOING IDEAS DISK UTILITIES 2.1
PUBLISHED BY: ON-GOING
MEMORY: 48K, APPLESOFT ROM
HARDWARE: DISK II
The DISK UTILITIES disk consists of five programs all deisgned to work with one disk drive.
A. COPY - a program to copy disks
B. PATCH - a program to display or modify any sector on a disk
C. DISK STATISTICS - a program to display the amount of unused disk space
D. COMPARE - a program to compare disks
E. CERTIFY - a program to verify that all sectors flassed as written on can be read
PRICE: 19.95

TITLE: PASCAL
PUBLISHED BY: PERSONAL COMPUTERSOFT

Clarity Pascal is a high level language specifically designed for today's single-user limited-memory microprocessor-based computers. Clarity Tiny Pascal is a subset of Pascal inspired by Chung & Yuen's "Tiny Pascal Compiler" (Byte 3(9), Sept. 1978). The compiler compiles the Pascal program into an intermediate P-code, which is then translated or interpreted on the host computer. Since only the P-code translator or interpeter changes from microprocessor to microprocessor, Clarity Pascal can be quickly and easily implemented on new computers. The P-code instruction set used by Clarity Pascal was designed by the guidelines in Tanenbaum's "Implication of structured Programming for Machine Architecture" (Communications of the ACM 21 (3); Mar. 1978). This article details the optimal instruction set for block-structured contour-modelled programming languages such as Pascal. By using this optimized P-code set, it was possible to shrink the Tiny Pascal compiler to its present size of 5K (about 5000 bytes), with a significant increase in speed. (Details of the P-code set may be obtained from Programma International).

The purpose of a high-level language is to shield the user from boring or complicated details of program implementation and to allow him to design his program in a clear and structured fashion. However, programs written for a microprocessor environment sometimes need access to machine-level features, such as a panel switch or monitor subroutine. Tiny Pascal has two extensions to handle such needs:

1. A built-in phantom array called MEM. The size of MEM is the entire address space of the computer. Reading to or writing from memory is specified by assigning to or from MEM, A: = MEM (1000 16) reads memory location 1000 16 into variable A.

2. Subroutine calls may be made directly to absolute addresses. The Pascal contour is not affected. When the subroutine returns, the program continues normally. CALL 9000 16 transfers control to 9000 16.

Tiny Pascal is a one-pass compiler which assumes that both source code and P-code may be generated on top of the source code. Tiny Pascal will work effectively in environments where the only secondary memory storage is a cassette tape recorder. Tiny Pascal will compile short programs in a 16K memory space. Since the P-code interpreter only occupies about 2K (about 2000 bytes) during actual program run-time, Tiny Pascal can be used as a high level language for dedicated controller applications.

Clarity Tiny Pascal includes the standard flow of control constructs IF, - THEN - ELSE, CASE expression OF - ELSE, WHILE - DO, REPEAT - UNTIL and FOR -TO/DOWN TO - DO. Procedures and functions are fully recursive. Hexadecimal constants are allowed and hexadecimal and decimal conversion input/output routines are provided.

Clarity Pascal is designed by Martin Tracy of Clarity Consultants and is available through Programma International.

Clarity Pascal Version 1.0

Grammatically identical to Chung & Yuen's "Tiny Pascal Compiler" Byte Sept. 1978, the compiler produces an optimized intermediate P-code set. Version 1.0 occupies about 5K (5000 bytes) of memory and will compile short programs in a 16K memory space, although a 32K memory space is recommended. Tiny Pascal is a single-pass compiler and will work effectively with cassette-based computers. An editor is included which provides both line and intra-line editing. Version 1.0 includes the standard flow of control construct: IF - THEN -ELSE, CASE expresssion OF - ELSE, WHILE - DO, REPEAT - UNTIL and FOR -TO/DOWN TO - DO. Procedures and functions are fully recursive. Hexadecimal constants are allowed and hexadecimal and decimal conversion input/output routines are provided.

NOTE: Clarity Tiny Pascal compiles programs into an intermediate P-code which is translated or interpreted on the host computer. This makes programs written in Tiny Pascal highly portable, including the compiler itself. The Apple II implementation of Tiny Piscal, for example, required only one man-month of programming effot. Programma International is interested in implementing Tiny Pascal on all popular microprocessors and will support such implementations on a royalty basis. Interested programmer should contact Programma International for the implementation manual and further details.
PRICE: Disk 49.65

PASCAL EXPRESS UTILITY PACKAGE
PUBLISHED BY: SOFTWARE EXPRESS

PASCAL EXPRESS UTILITY PACKAGE, a package of utilities and other software for the APPLE II, is designed to help users with some programming experience in BASIC to get aquainted with UCSD PASCAL.
FOUR procedural units are provided, in a format easily adaptable to any application. They simplify input/output formatting, allow access and/or change in the disk directory from a PASCAL program, perform integer - string - real conversions, and support files of variable-length records!
FIVE sample programs are also on the disk. They are a set of simple PASCAL demos with listings on BASIC equivalents, a routine to view disk files in ASCII or hex code, a text formatter for simple word processing, a program to maintain a veriable-length data file for the international traveler and a Happy Birthday Surprise.
PRICE: $45

TITLE: PASCAL INTERACTIVE TERMINAL SOFTWARE (P.I.T.S.)
PUBLISHED BY: MICRO SOFTWARE SYSTEMS

The P.I.T.S. package allows you to use your Apple II* and your D.C. Hayes Micromodem II* as a very intelligent terminal that can communicate with other systems over the telephone lines at either 110 or 300 baud ASCII.
While you are connected to the other system, the software maintains a 24K copy buffer. You can at any time copy all data going through the modem into the copy buffer, and then store it to disk as a standard PASCAL text file which can later be accessed with the PASCAL editor.
The buffer is capable of holding about 15 typewritten pages of data, which is more than you can effectively handle with the PASCAL editor. Very large files can often be saved onto disk by pausing the output of the remote system and saving out the buffer before restarting transmission. Huge data files have

successfully been transmitted in this manner.
At any time, you can transfer any text file on your disk to the other system. Provision is made for transferring a character at a time for slow systems, or a line at a time for packet switching networks. Provision is also made handling systems that send back input prompt characters.
FEATURE SUMMARY:
Dial out thru program, optional delay characters.
Source code on diskette so that initial values such as screen width, baud rate and duplex mode can be user selected.
File transmit capability.
24K copy buffer. Buffer commands include:
Copy on
Copy off
Save buffer
Clear buffer
Simultaneous printing of data passing thru modem
Full/Half duplex and 110/300 BAud rate toggles.
Leave and return to program without losing modem connection.
This program has been developed using our Pascal Utilities Micromodem Pakcage (PUMP), and has been tested extensively on a wide variety of timesharing systems.
PRICE: 34.95

PASCAL TRANSCENDENTAL ROUTINES
PUBLISHED BY: COMPUTER STATIONS, INC.

Software supplied on diskette to utilize the capabilities of the AM9511 on our Fast Floating Point Board (Stock #7001) with Pascal. Available separately for those who have already puchased the CSI FFP Board.
PRICE: $25.00

TITLE: PBASIC-DS
PUBLISHED BY: DECISION SYSTEMS

PBASIC-DS is a sophisticated preprocessor for structured BASIC. Now you can gain the power of PSACAL-like logic structures at a fraction of the cost. Use all regular BASIC statements plus 14 commands and 11 new statements/structures (WHILE, UNTIL, CASE, etc.). PBASIC-DS can be used to develop INTEGER or APPLESOFT programs. It is a great way to learn and use structured logic concepts. Requires: Disk, Applesoft (48K ROM).
PRICE: $35.00

TITLE: PROGRAM CATALOG
PUBLISHED BY: COMPUTER FORUM
MEMORY: 24K

This program will catalog all your disk programs by category on one disk. It will keep track of all your programs and which disks they are on as well as keeping notes about the program so you can be sure of the program before you hit the proper key to have this program load and run the program you want. It also contains numerous routines to manipulate the information.
PRICE: 19.00

TITLE: PROGRAMMER PLUS

A 16 lesson course in Applesoft II on two full disks or super-load tape which will teach you all you need to know to program in BASIC. Lessons cover all scientific or business applications. Special units teach graphics and sound to add a little Apple Class to your programs. Applesoft II.

PRICE: TAPE $24.95
DISK $34.95

TITLE: PROGRAMMER'S UTILITY PACK
PUBLISHED BY: SOUTHEASTERN DATA SYSTEMS

Set of 11 programs. Appends, STR$() and VAL() are on printed doucmentation with the tape version. Programs include Renumber-Integer & Applesoft, Append-Integer No. Applesoft, Line Find-Integer & Applesoft, Address/Hex Converter, Screen find, Memory Move, and the STR$() and VAL() function simulations for Integer. By using the various programs, one can renumber Integer and Applesoft programs with all GOTO's, etc. being renumbered and the user alerted to unusual situations in the program. These include referenced line nos. not in the program, lines referenced by a variable or expression, and a number of others. Line Find allows the user to locate the actual address range of a line in memory so as to be able to insert CLR, HIMEM:, etc. Can also be used on occasion to recover programs garbaged by dropped bits. Address/Hex Converter converts between the Hex, Integer, and Applesoft address formats. It also provides the two byte breakdown of numbers greater than 256 for use in pointers, etc. Screen Find is used for printing directly on the screen by POKEing appropriate values into the proper locations in memory. Screen Find gives these values and locations when the characters desired and the horizontal, vertical screen positions are input.

TITLE: PROGRAM UNLOAD
PUBLISHED BY: POWERSOFT, INC.
MEMORY: 16K, APPLESOFT, DISK

A utility program designed to copy Applesoft II and/or Interger Basic programs from disk to cassett tape. Groups of programs or a single program may be copied any number of times in one operation. The program is an excellent means for creating a "back-up" of a disk.

PRICE: TAPE, 7.45

TITLE: PSORT
PUBLISHED BY: APPLE COMPUTER INC.

Solve your Pascal disk file sorting problems with PSORT, a stand-alone program that can also be incorporated into other Pascal programs as a ready-made routine. PSORT lets you sort files through a wide variety of user-defined keys, such as name, ZIP code, age, account number, and more. A unique selection option lets you further specify which records are to be included or excluded in sort and merge processes.

With PSORT, you can choose between fixed or variable-length records and fields, and test or string files—so you enjoy a high degree of programming application flexibility and convenience. You can also select all critical system parameters, including number or sort keys, files to be merged, fields per fixed-length record, characters per record, and characters per field. And full source code is provided, so you can even modify PSORT's procedures to meet your particular needs.

PSORT also: can be called as a procedure from a user program ... so you cut costs by reducing development time; provides up to 10, user-redefinable sort keys with mixed ascending/descending sequences ... so you have comprehensive sorting capabilities at your fingertips; can merge up to 10, user-redefinable, pre-sorted files ... so you consolidate large files more efficiently; supports multiple disks for input, output, and work files ... so you can fully utilize diskette storage space; lets you supply parameters either through interactive prompting, or through a control file that's set up only once ... so it's easier for you and others to use the program.

Anyone with Pascal programming experience will find PSORT easy to use. Just compile the PSORT programs—provided in Pascal source code—and execute them in the usual way. PSORT leads you step-by-step through the sorting process. Merging is easily done, too. Just enter the file names of the input files to be merged, whether they reside on the same or different disks.

Using PSORT's include/exclude option is simple and straightforward. Suppose you're sorting a mailing label list, and you want to exlcude all labels in a certain ZIP code area. Just indicate "E(xclude" when prompted, specify the field number, and enter the excluded ZIP code as the selection value. Automatically PSORT will omit any label with the undesired ZIP code when sorting.

To use PSORT, you'll need: an Apple II or Apple II Plus with 48K bytes RAM; an Apple Language System; an Apple Disk II with controller (16-sector PROMs); a video monitor or television.

With the PSORT package, you'll receive: 1) PSORT program diskette, containing source code, executable code, a parameter program to set up a control file, and a sample Pascal program that uses PSORT as a procedure; 2) PSORT user manual.

PRICE: $85.00

TITLE: RAM TEST
PUBLISHED BY: APPLE COMPUTER
MEMORY: 16K

A test program that provides peace of mind during RAM expansion by testing the installed RAM.

PRICE: TAPE, 7.50

TITLE: REVIVE
PUBLISHED BY: HAYDEN BOOK COMPANY
MEMORY: 16K

When a program is accidentally erased, REVIVE searches through memory and finds information that enables it to restore the pointers that have been changed. Can be loaded at any time, before or after you have entered an Applesoft program, or before or after you have accidentally erased the program.

TITLE: SCREEN-DUMP/REPEAT
PUBLISHED BY: COMPUTER HOUSE DIV.

Similar to Docu-Print except in machine language. Plus repeat allows you to hold any key (including cursor control keys) to repeat, similar to the repeat function on the 8032 CBM computer.

PRICE: $35.00

TITLE: SCROLL CONTROL
PUBLISHED BY: SOFTAGON INCORPORATED

Have you ever wondered why you cannot list an Integer Basic or Applesoft program one screen-page at a time? So have we, and we did something about it! Our machine language Scroll Control, hidden in RAM so as not to "bump" into your program, can be engaged or disengaged at a stroke of the keyboard. Why be frustrated when instead you can control the scroll?
PRICE: CASSETTE $9.95 DISK $14.95

TITLE: SCRUNCH-PLUS
PUBLISHED BY: COMPUTER HOUSE DIV.

Packs a program, saves up to 25% of memory space.
PRICE: $25.00

TITLE: SINGLE DISK COPY
PUBLISHED BY: COMPUTER STATIONS, INC.

An extremely good utility program for the Apple II. Allows owners of only one disk to back up insert work. Copy is very fast, does verification, and requires a maximum of 3 passes on 48K system (5 passes on 32K). Uses 3.2 DOS.

TITLE: SINGLE DISK SORT
PUBLISHED BY: DATACOPE

A fast disk-oriented machine language sort program. Uses only one disk drive and can sort a full diskette of data with up to ten key fields. Completely compatible with Rainbow Computing's Filemaster I & II programs, Pascal Language System, and Sorrento Valley 8" disk drive controlller. If you want to use this program with Filemaster I, ask Rainbow for a special version of SINGLE DISK SORT.
APPLESOFT/ASSEMBLY. 32K
PRICE: DISK $49.95

TITLE: SINGLE DRIVE COPY
PUBLISHED BY: PROGRESS

This is an integer basic program that allows you to copy diskette using one drive. It gives you the option of using either an initialized or non-initialized diskette. It is supplied on tape and should be loaded onto a diskette. It automatically adjusts for the memory size in your Apple, and should be used with DOS 3.2.
PRICE: DISK, 19.95

TITLE: SLOW LIST/STOP LIST
PUBLISHED BY: HAYDEN BOOK COMPANY
MEMORY: 16K

Start, stop, and control the speed of your program with Apple II's game paddles. You can also control the speed at which the disk catalog appears and even terminate the CATALOG operation in the middle. The program can also be enabled and disabled under software control.

PRICE: TAPE, 10.95

TITLE: SORTER
PUBLISHED BY: COMPUTER HOUSE DIV.

Sorts a one dimensional array alphabetically (in machine language).

PRICE: $35.00

TITLE: STEP BY STEP
PUBLISHED BY: PROGRAM DESIGN, INC.
MEMORY: 16K

Ages junior high to adult. 32 programs and a 64-page workbook teach programming in BASIC for the beginner. Introduces all important BASIC commands and programming logic, including simple string logic and one-dimensional arrays. Lessons are interactive, presented in a question-and-answer format on the computer screen. The Workbook adds extra information. Through instruction, structured practice, and frequent skills testing, the user learns how to write BASIC programs.

PRICE: 3 TAPES, WORKBOOK, VINYL BINDER, 49.95
ON 2 APPLE DISKS 59.95

TITLE: SUPERDISK - DISK INTERFACE PROGRAM
PUBLISHED BY: ECLECTIC RENTALS INC.

Superdisk is a program which permits one to utilize the features of Superchip while running under Apple DOS. The program is designed to reside on a diskette, but is distributed on an audio cassette for convenience and economy. The documentation describes how to transfer the program to diskette, initiate it and create a procedure which initiates it automatically when one boots DOS. The Superchip without this program does not fully support DOS.

PRICE $19.95

TITLE: SUPER SORT & SEARCH
PUBLISHED BY: PROGRESSIVE SOFTWARE

A free-form data-base pkg. which allows the User to define fields per record. As the data is loaded in it is automatically sorted. Can also merge together files or allow key sort entries. Will sort out a particular field, do a generic search and/or search for a specific piece of data. Will allow each particular record or records to be printed.

PRICE: $69.95

TITLE: TINY PASCAL 1.0
PUBLISHED BY: PROGRAMMA INTERNATIONAL

TINY PASCAL is a high level language specifically designed for today's single-user, limited memory microprocessor-based computers. The compiler compiles the Pascal program into an intermediate P-code, which is then translated or interpreted on the host computer. TINY PASCAL is a one-pass compiler which assumes that both source code and P-code are in memory. TINY PASCAL will

work effectively in environments where the only secondary memory storage is a cassette tape recorder. It will compile short programs in a 16K memory space. Since the P-code interpreter only occupies about 2K during actual program runtime, TINY PASCAL can be used as a high level language for dedicated controller applications. TINY PASCAL includes the standard flow of control constructs, IF-THEN-ELSE, CASE expression OF-ELSE, WHILE-DO, REPEAT-UNTIL, and FOR-TO/DOWN-DO. Procedures and functions are fully recursive. Hexadecimal and decimal routines are provided.
ASSEMBLY/INTEGER. 32K.
PRICE: DISK $49.95

TITLE: TRACE-PRINT
PUBLISHED BY: COMPUTER HOUSE DIV.
Prints listing of all line numbers in order of execution as program is operated.
PRICE: $25.00

TITLE: TRACK & SECTOR LIST
PUBLISHED BY: SOFTAGON INCORPORATED
Now available with 3.3 DOS update!! TRACK & SECTOR LIST by Craig Robertson sold internationally in 22 countries!
Program won't load? Trouble booting the disk? CATALOG returning I/O ERROR? TRACK & SECTOR LIST can be the answer. With TRACK & SECTOR LIST you can read and change any data bit on your disk, giving you direct control over undamaged disks.
TRACK & SECTOR LIST is an interactive assembly language program which enables the disk to be directly accessed. Because the data on entire sector is displayed on one screen page, it is possible to identify an I/O ERROR and recover from it, change the name of a program, find "hidden" control characters, undelete an accidentally deleted program and much more.
EASY TO USE: "Operating the progoram is so effortless and well thought out that it is very easy to remember how to use even without instructions."
John Martellaro — PEELINGS II (TM) Magazine, Vol. 1 No. 2 July-Aug., 1980
©Copyright 1980 Peelings II, Inc.
TRACK & SECTOR LIST is extremely easy to use. For example, to examine a sector, simply specify the Track number and Sector number, then hit the "R" key and that sector will appear on the screen. To examine the next sector, hit the "+" key; hitting the "-' key moves you back, there is rarely a need to hit (RETURN) after a command. You don't even have to press the shift key to get a "+".
32 PAGE TUTORIAL MANUAL: TRACK & SECTOR LIST comes with an attractive 32 page tutorial manual, instructing the user in the basic concepts of disk operation, file organization and use of the program. Further, the manual progresses to detail directory format, the VTOC, track bit maps, etc., and describes four of the many applications for TRACK & SECTOR LIST. Appendices include the ASCII character code, a summary of commands, and more.
PRICE: $29.95

TITLE: TRANSLATOR
PUBLISHED BY: MICROPRODUCTS
This program will translate any programs developed on microproducts old 4 Character Assembler and allow them to run on the new 6 Character Asembler.
PRICE: $9.95 Cassette

TITLE: UNCOPY
PUBLISHED BY: MICRO-WARE DISTRIBUTING INC.

A unique way to make APPLE disks uncopyable. Just load in the software that you want protected and init a disk with Uncopy. That's it (not for PASCAL or DOS 3.3 systems)

PRICE: $29.95

TITLE: UNLISTABLE BASIC
PUBLISHED BY: PYGMY PROGRAMMING

Unlistable BASIC is a machine language program that makes your Integer Basic program listings unintelligable. It is only available on disk. Once a program has been "Unlisted", it can be saved to either tape or disk like any other BASIC program.

Here is an example of what the program does:

Original —
```
10 CALL -936
20 TEXT
30 FOR X-1 TO 100
40 PRINT "HERE"
50 NEXT X
60 END
```
Unlisted —

```
10 CALL -936 HIMEM: SAVE *HIMEM: TEXT HIMEN:, OR HIMEM: FOR X-1
TO 100 HIMEM: NEW" HIMEM: PRINT "HERE" HIMEM: CON PDL HIMEM:
NEXT X HIMEM: SAVE ASC( HIMEM: END
```

The finished "Unlisted" program is the same length as the original and its running is unchanged.

PRICE: $39.95

TITLE: UTILITY PAK 1
PUBLISHED BY: PROGRESS

This is a combination of 4 programs:
Integer to Applesoft Conversion - this program will convert any integer basic program to an applesoft program. After you are finished, you merely correct all of those syntax errors that occur with applesoft only.
Disk Append - will append any two integer programs from a disk into one program.
Integer Basic Copy - allows you to copy an integer basic program from one disk to another by merely hitting return. Useful when copying the same program many times.
Update Applesoft - will correct applesoft on the disk to eliminate the heading that always occurs when it is initially run.
Binary Copu - this program copies a binary file from one disk to another by merely hitting return. It automatically finds the length and starting address of the program for your convenience.

PRICE: TAPE, 9.95

TITLE: VARLIST
PUBLISHED BY: EK
The VARLIST allows you to use your paddle to control the display speed of any text that goes to the screen.
You can scan at fast speed, browse at a slower rate, or stop the list at any point.
Use VARLIST to study any step of what is happening in your program. Use with the trace on. GREAT FOR DEBUGGING. VARLIST works with tape or disk systems. (Comes in cassette with a DOS version.)

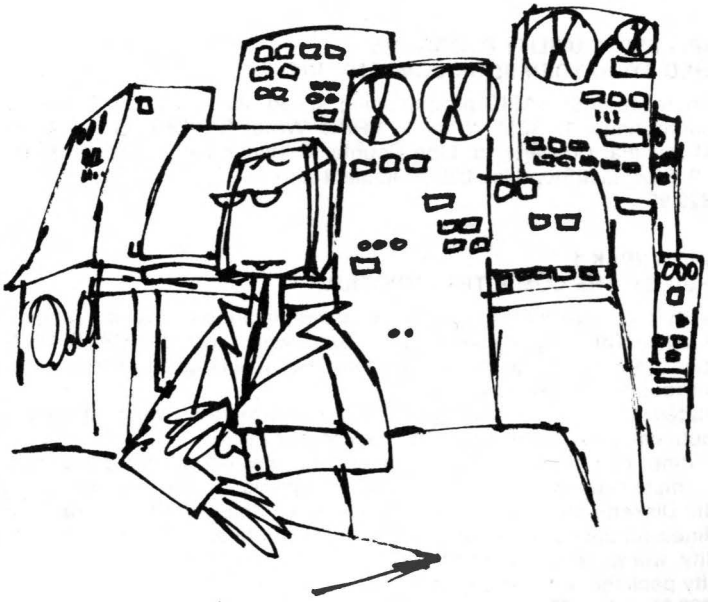
TITLE: VARI-PRINT
PUBLISHED BY: COMPUTER HOUSE DIV.
Prints a listing of all variables in your program alphabetically plus every line number where variable occurs. Also leaves space for Programmer to write in comment or function of each variable.
PRICE: $25.00

TITLE: VIDEO/PRINT/LIST CONTROLLER
PUBLISHED BY: HSS
Adds useful new commands for more convenient control of program running and listing. Dynamic speed control, suspend/resume, aligned colon format, compact format, memory status display, simultaneous video printer, easier cursor control. (Written in Machine Language for high speed and compatability with all programming languages.
PRICE: TAPE or DISK 39.00

TITLE: XREF/65
PUBLISHED BY: LAZER SYSTEMS
A cross reference program for LISA 1.5 & LISA 2.0. A cross-reference is vital for program development, debugging, and documentation. XREF/65 lists all labels defined in a program. The line # where the label is defined, and the line # of each occurrence of the label within the program. XREF/65 also prints out an OPCODE frequency map for the program so that the user can see which OPCODES are used most frequently. The LISA 2.0 source listing for XREF/65 is provided as part of the package.
+ PLUS, on the same diskette.
SORT 2.0 (source included) sorts, alphabetically and numerically, LISA 2.0 symbol tables and prints the symbol table in an 80-column format.
SC TO LISA (Source included) converts SC Assembler II V3.2 files to LISA. Now SCASM II owners can easily upgrade to the more powerful LISA assembler.
Requirements: 48K Apple II or Apple II Plus and Disk Drive.
PRICE: $19.95

PROGRAMMING AIDS SECTION 2

Apple™ Assembly Language Development System: An Assembler/ Editor/Formatter 2PA-1
Apple Disk Fixer 2PA-1
Apple Mae 2PA-1
Applesoft Utility Programs 2PA-1
Brownpak-1 ..... 2PA-1
DOS 3.3 ..... 2PA-2
Dakin5 Programming Aids 3.3 ..... 2PA-2
Double DOS 2PA-3
Macro ASSM/TEC 2PA-3
Pascal Utility Express Package 2PA-3
Psudodisk 2PA-4
Supper Apple™ Basic 2PA-4
Super Kram's™ 2PA-4
6502 Disassembler 2PA-4
Wozpak II 2PA-4
uSpeed 2PA-5
First 2PA-5
Fortran Transcendental Routines 2PA-5
Macro-Sced 2PA-5
Pascal Transcendental Routines 2PA-6
Single Disk Copy 2PA-6



TITLE: APPLE™ ASSEMBLY LANGUAGE DEVELOPMENT SYSTEM: An Assembler/Editor/Formatter
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Lutus) Write and modify your machine language programs quickly and easily. 04609, Apple II Disk Version
PRICE: $39.95

TITLE: APPLE DISK FIXER
PUBLISHED BY: IMAGE COMPUTER PRODUCTS

If you care enough to back up critical programs and files, Disk Fixer™ will give additional peace of mind. This powerful utility for experienced Apple users is a tool kit for manipulating, repairing, and protecting all data on disk.
Use the high-speed full screen editor to examine and easily change any portion of a disk, correct space usage within files, and save money by locking out bad tracks on disks. Directories are alphabetized, if you choose.
The display and search capabilities show where specific hex or ASCII data is located and you can modify any data including binary files.
APPLE II, 32K, Disk, 13 or 16 Sector.
DOS 3.2, DOS 3.3 & LANGUAGE SYSTEM DISK

TITLE: APPLE MAE
PUBLISHED BY: EASTERN HOUSE SOFTWARE

A 100% Machine Language, all disk oriented Macro Assembler/Text Editor. A word processor is included. Features macros, conditional and interactive assembly, etc. This software is a must for every serious assembly language programmer. Requires license agreement.
PRICE: $169.95

TITLE: APPLESOFT UTILITY PROGRAMS
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Gilder) Increase your BASIC programming speed and flexibility. Contains 9 useful subroutines: 1. REM Writer 2. PRINT Writer 3. POKE Writer 4. Hexadecimal Decimal Converter 5. Line Counter 6. Renumber 7. Append 8. Byte Counter 9. Slow List/Stop List. 03504, Apple II tape
PRICE: $29.95

TITLE: BROWNPAK 1
PUBLISHED BY: THE COMPUTER EMPORIUM

These utility programs written by Donald Brown, include a machine language program called The Programmer's Power Tools which includes PRINT USING capabilities, packing and unpacking of data, machine-language sorting and a new input routine for disk usage.
Also included in this package are several Applesoft programs which can be used as subroutines in your own programs, the company said.
All subroutines in this package are designed for use with Applesoft programs so you can implement them into your own programs. These utilities include Automatic Diskette Menu, Disk Free utility, Hi-Res Shape utility programs and User-Defined functions from basic. All of these routines, other than the Disk Free utility, will work from cassette.
This utility package on diskette, with instruction manual.
PRICE: $39.95, retail, $3.63 per utility.

TITLE: DOS 3.3
PUBLISHED BY: APPLE COMPUTER INC.

DOS 3.3 is the handy housekeeper developed by Apple to help you take full advantage of your Disk II Floppy Disk Subsystem. DOS automatically keeps track of files, saves and retrieves information on a diskette, and performs a variety of other "housekeeping" chores. It dynamically allocates diskette space, maximizing diskette capacity. DOS stands for Disk Operating System; 3.3 is the version update number. When you purchase an Apple Disk II with controller, you are buying and Apple floppy disk drive and DOS 3.3
NOTE: DOS 3.2.1 has been superceeded by DOS 3.3. Programs which operate under DOS 3.2.1 cannot be read by DOS 3.3 (unless coverted by "Muffin", a DOS 3.3 utility program). Conversely, DOS 3.2.1 cannot read DOS 3.3 programs.
For those Apple II/II Plus owners who wish to use, or are currently using, programs running under the previous operating system, Apple will continue to offer and support DOS 3.2.1 (Apple Product #A2D0010).
DOS 3.3...
• Simplifies system start up by allowing for turnkey operation under Apple BASIC...
• Increases disk capacity by more than 20% over previous versions of DOS...
• Increases a system's capability by storing and retrieving information much more accurately, quickly, and conveniently than is possible with cassete tape...
• Adds to system efficiency by allowing you to access data by the name under which it is filed...
• Saves time spent searching for files because it automatically catalogs them by name and displays the complete catalog upon command...
• Provides the capability to save, load, run, rename, delete, and verify files quickly and easily through its variety of housekeeping commands...
• Allows rapid data retrieval through both sequential and random access to the data...
• Allows you to make back-up copies of diskettes on a single disk drive system, rather than requiring two drives for the same purpose.

TITLE: DAKIN5 PROGRAMMING AIDS 3.3
PUBLISHED BY: DAKIN5 CORPORATION

Also compatible with the Corvus Disk Drive system. This 12-in-1 set of utility programs accomplishes the following:
THE LISTER — sends BASIC Programs to the printer to be listed, utilizing the full line capacity of the printer. Pagination and page headings, including program name and date, are also provided as additional options.
THE LINE CROSS REFERENCE — produces a display or a printed listing of all lines referened by GOTO, THEN, GOSUB, LIST or RUN statements in an Applesoft BASIC program. Cross-referencing of most programs is done in a few seconds. An option allows you to print only the line numbers referenced in GOSUB statements.
THE VARIABLE CROSS REFERENCE — creates a display or a printed listing of all variable names used in an Applesoft BASIC program, showing all line numbers where a given variable name is used.
THE PEEKER — displays or prints either all or selected records from a text file.
THE PATCHER — allows you to display any sector of a given file or program, and then to update any data within that sector. Another option permits you to specify the sector you wish to update such as directory sectors and sectors occupied by DOS.
THE COPIER — copies absolutely ANY type of file or program on a normally formatted diskette from one diskette to another. The name of the program or file is the ONLY information needed.

THE CALCULATOR — adds, subtracts, multiplies and divides very large numbers using numeric string data. The Calculator subroutine (using twenty place accuracy) is written in Assembler code, and runs much faster than an equivalent BASIC subroutine.
THE DISKETTE COPY — is a diskette-to-diskette copy program that does more than just copy. First, the program verifies the input. Then it formats an output disk, copies each track, and checks that the output matches the input. Additional options allow you to either initialize a diskette without DOS, or to create a copy without DOS, thereby increasing storage by 32 sectors. You may even create a copy with a different volume number than the original.
THE ARRAY EDITOR — is a simple word processor that allows you to create, modify, print and save your own text or EXEC files.
THE SCREEN PRINTER — permits contents of the text screen to be sent to the printer at any time the keyboard is active (i.e. the cursor is visible). This Screen Printer program remains in effect until you press RESET or "reboot" the system.
THE PROMPTER — is a data entry subroutine that handles both string and numeric data. You have the option of using commas, decimal points and leading zeros with right-justified numerics. Alphanumeric data is left justified with trailing spaces added as required. With the Prompter you are also able to specify maximum field length to prevent overflow in both numeric and alphanumeric fields. You can even define your own set of valid characters.
THE CRUNCHER — removes REM statements, unreferenced (dead) code, and compresses code in Applesoft programs. This will increase the speed of your programs; memory and disk space savings could be more than 45%
Many of these utility programs have been developed and tested for in-house use while producing The Controller business package for Apple Computer Inc.
Each programming aids package includes a program diskette and very complete documentation, all attractively packaged in a padded, blue print vinyl 3-hole notebook with silver lettering. An identifying tab separates each program for convenient reference.
PRICE: $70.00

TITLE: DOUBLE DOS
PUBLISHED BY: TELEPHONE SOFTWARE CONNECTION

This program loads into the top of your Apple's memory, slightly lowering HIMEM, and stays there as long as you don't clobber it with programs that require full memory. While it's there, you can switch from DOS 3.3 to 3.2 and vice versa at will and as often as you wish, merely by a call or, from Applesoft, an ampersand. 48K, disk, DOS 3.2 and 3.3, Apple's Muffin program.
PRICE: $18

TITLE: MACRO ASSM/TEC
PUBLISHED BY: EASTERN HOUSE SOFTWARE

Our Popular Macro Assembler/Text Editor. 100% Machine Language — Fast. String search and replace, labels up to 31 characters!
PRICE: $49.95 cassette and manual, $55.95 diskette and manual

TITLE: PASCAL UTILITY EXPRESS PACKAGE
PUBLISHED BY: SOFTWARE EXPRESS

A package of utilities and other software for the Apple II designed to help users with some programming experience in BASIC to get acquainted with UCSD Pascal.
PRICE: $45

TITLE: PSUDODISK
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Neuschatz) This money-saving program simulates a disk memory system for Integer BASIC programs. It allows multiple programs in memory at the same time which can be run from a catalog. 04804, APPLE II tape
PRICE: $24.95

TITLE: SUPER APPLE™ BASIC
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Lutus) A structured BASIC that compiles into an optimized Applesoft or Integer BASIC program, 05409, Apple II Disk
PRICE: $39.95

TITLE: SUPER KRAM'S™
PUBLISHED BY: UNITED SOFTWARE

MULTIKEY SUPPORT — Allowing simultaneous access to a KRAM file by more than one key field.
HI-SPEED READ — This feature allows increased I/O speed up to 60% faster during processing of SUPER KRAM read next, read previous, put and delete requests.
IMPROVED INDEX ARCHITECTURE — Allowing faster index searchers and more efficient disk space utilization.
INTEGRATED BASIC COMMANDS — Allowing SUPER KRAM™ commands to be coded in-line with Basic, providing easier usage of KRAM than ever before.
USER-SPECIFIABLE BUFFER POOL — Allowing the user to specify how many KRAM files are allowed open at one time; will support any number of KRAM files.
LOGICAL RECORDS (KEYS MAY BE NON-UNIQUE) — Records added to the KRAM files are immediately accessible by any of the defined keys for the file (Automatic Upgrade).
KRAM 2.0 files are totally compatible with SUPER KRAM.

TITLE: 6502 DISASSEMBLER
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Stamm) Produce assembly language source files with labeled subroutines and references from programs already in memory. It is compatible with Hayden's ASSEMBLY LANGUAGE DEVELOPMENT SYSTEM. 08609, APPLE II Disk
PRICE: $34.95

TITLE: WOZPAK II
PUBLISHED BY: PUGETSOUND PROGRAM LIBRARY EXCHANGE

A collection of useful information and listings of numerous programs for the Apple II. Includes such programs as LINE NUMBER CROSS REFERENCE, SYMBOL CROSS REFERENCE, RENUMBER, APPEND, MACHINE CODE RELOCATION, TAPE VERIFY, HI-RES GRAPHICS, etc. Explains how to modify early Apple II PC board to add blue and orange Hi-Res colors, and a "color killer" for text display. These are Steve Wozniak's original notes on the Apple II in "cleaned up" form, finally available to the public.
PRICE: $22.50

TITLE: uSPEED
PUBLISHED BY: APPLIED ANALYTICS INCORPORATED

The microSPEED Language System combines the benefits of compiled code and hardware arithmetic processing for the maximum in microcomputing performance. Developed from an extended version of Forth, the System is ideally suited to the serious Apple user.
THE POWERFUL, PAINLESS ALTERNATIVE TO BASIC AND PASCAL.
Runs six to sixty times faster than Basic
Programming capabilites well beyond Applesoft
Auxiliary Processor (Am9511) for fast Floating Point
High-speed, extended high resolution graphics
Software development time cut in half
Exceptionally compact, compiled code
Extensible, structured language to meet your needs
Bonus: Increased speed Applesoft functions
Requires 48K Apple II or II+, single Disk
PRICE: $1495.00 Complete System, $35.00 Manual only

TITLE: FIRST
PUBLISHED BY: COMPUTER STATIONS, INC.

A language developed specifically for use with the Apple II (or Apple II Plus) system and Computer Station's FFP Board is called FIRST. The FIRST language is structured, modular, extensible and interactive, like FORTH. But FIRST is a true optimizing compiler which generates short efficient machine instruction sequences resulting in shorter execution times. More information regarding FIRST may be obtained from Dr. John Scandrett, c/o Washington University, Physics Dept., Box 1105, St. Louis, Mo. 63130, (314) 889-6236.

TITLE: FORTRAN TRANSCENDENTAL ROUTINES
PUBLISHED BY: COMPUTER STATIONS, INC.

Software supplied on diskette to utilize the capabilities of the AM9511 chip on our FFP Board with FORTRAN.
PRICE: $25.00

TITLE: MACRO-SCED
PUBLISHED BY: COMPUTER STATIONS, INC.

MACRO—SCED is a cursor oriented screen editing tool for the novice as well as for the serious programmer. In fact, any one who types in any program at all, whether copying from books or writing his own, cannot afford to be without it. It's a great time saver. Editing BASIC programs actually becomes fun. MACRO-SCED is easy to use and yet it has features found previously only on expensive terminals. Commands are executed through CONTROL character. It works in Integer Basic or Applesoft (ROM or RAM) and in monitor. This machine Language program is completely transparent to the user and only uses 1.5K of memory. Basic activation programs and a macro building programs are provided.
FEATURES: Character or Line insertion and deletion. Copy an entire screen-line with a single 'CTRL' key. Complete listing (all screen output) controls including stop-, slow-, page-, and end-list.
User defined keyboard Macros. Two key sequence to type or execute often used Basic/DOS commands, phrases or statements. (up to 56 Macros in two tables). Special screen content saving feature, up to 35 screens limited only by free memory.
Screen-writer and screen dump to printer subroutines plus more editing aids; displaying the input buffer before hitting return, inverse block cursor to ease eye strain, etc.
PRICE: $39.95

TITLE: PASCAL TRANSCENDENTAL ROUTINES
PUBLISHED BY: COMPUTER STATIONS, INC.

Software supplied on diskette to utilize the capabilities of the AM9511 on our Fast Floating Point Board (Stock #7001) with Pascal. Available separately for those who have already purchased the CSI FFP Board.
PRICE: $25.00

TITLE: SINGLE DISK COPY
PUBLISHED BY: COMPUTER STATIONS, INC.

An extremely good utility program for the Apple II. Allows owners of only one disk to back up insert work. Copy is very fast, does verification, and requires a maximum of 3 passes on 48K system (5 passes on 32K). Uses 3.2 DOS.

SPECIAL INTEREST

Amateur Radio Log SI-1
Ham Radio Software SI-1
Maintenance/Service Kit with Instructions SI-1
Slow-Scan Television Package SI-1



TITLE: AMATEUR RADIO LOG
PUBLISHED BY: ALEX MASSIMO

Use for QSO's, contests, field days, DX, etc. Has 7 functions. Full info for revising to your needs.
PRICE: Cassette 19.95

TITLE: HAM RADIO SOFTWARE
PUBLISHED BY: GALFO

Send and receive in Morse, Baudot, or ASCII. Variable size text buffer; 3-field screen display; stored messages and more features. Uses on-board (game) I/O. To transmit over your radio rig requires a hardware interface. Schematic included in documentation. INTEGER/ASSEMBLY. 16K, 32K.

PRICE: TAPE $20.00
DISK $25.00

TITLE: MAINTENANCE/SERVICE KIT WITH INSTRUCTIONS
PUBLISHED BY: COMPUTER HOUSE DIV.

Makes repair of the computer possible by a T.V. repair person. Consists of schematics, diagnostic tapes and a list of symptoms and possible corrections for each.

PRICE: $195.00 Kit #1 for computer only
$295.00 Kit #2 for computer, disk drive & printer.

TITLE: SLOW-SCAN TELEVISION PACKAGE
PUBLISHED BY: C.H. GALFO

Replacing expensive hardware with inexpensive and flexible software is no better illustrated than by this program. The Apple II graphics capabilities are not ideally matched to an SSTV image (120 by 120 pics). The high resolution graphics offers more resolution that an SSTV signal contains but almost no gray scale (3 levels). In order to receive a good apparent gray scale and avoid picture contouring, a small amount of random noise can be added to a picture as discussed in many articles on picture processing.
This program automatically processes the received image in this manner. Another problem with SSTV is demodulation and modulation of the audio FM subcarrier; the conventional analog circuits are complex and not always optimum. For this reason, all modulation and demodulated is carried out by accurate timing in software. This program is unique in that it is the first all-software SSTV sending and receiving system available for any computer. Some of the many features include:

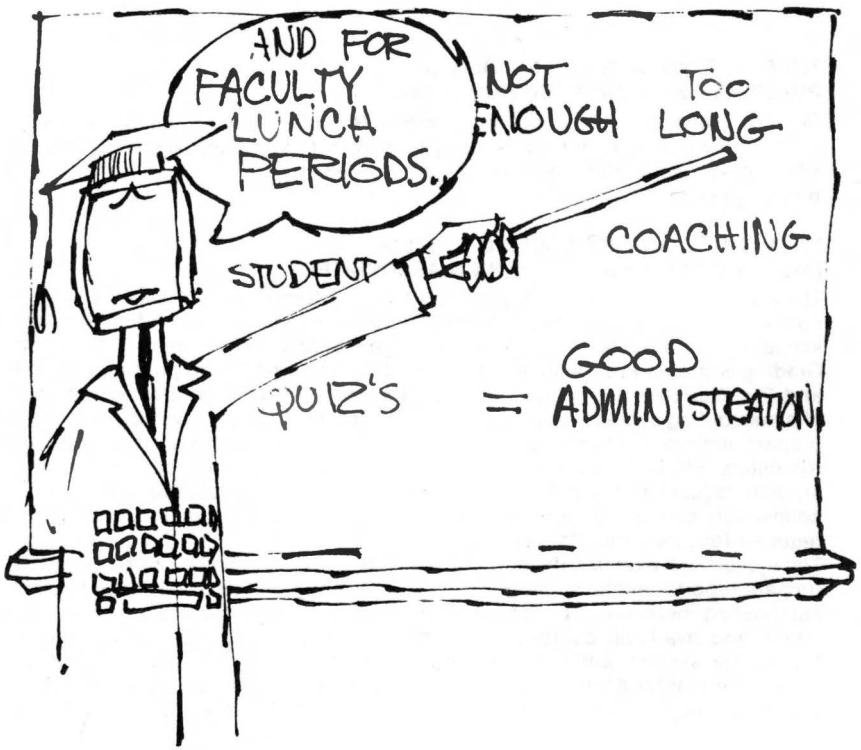
.....NO EXTERNAL HARDWARE REQUIRED - SSTV audio from a receiver, tape recorder, or an SSTV camera is connected directly to your Apple Cassette tape input. Modulation of an SSB transmitter is possible from the cassette tape output if a simple low-pass filter is added.
REAL TIME DISPLAY - Pictures are displayed in real time as they are received. A visual indicator is also displayed to give you a quick way of accurately tuning your receiver or adjusting other equipment.
.....KEYBOARD CONTROL - Control characters are used to control the program in any of its four operating modes. A full large-character display editor is included for preparing brief text displays for transmission. A drawing editor allows you to create pictures for transmission or to add special effects to the

large-character display fonts.
.....All machine code - The program and its data tables reside in 2.5K of memory (800 to 11FF Hex) and uses both low and high resolution graphics memory. PRICE: Cassette 20.00

SCHOOL ADMINISTRATION

Assistant Principal SA-1
Attendance Records for Teachers SA-1
Attendance for Students SA-1
The Class Scheduling System SA-1
Counsellor's Package SA-2
School Bus Routing Made Easy SA-2
Class Management SA-2
Study-Quiz Files SA-2
The Teaching Machine SA-3
Apple Teacher SA-3
Apple Grade Book SA-4
Educational Management SA-5
- Special Education Administrative Package SA-5
- Immunization Administrative Package SA-5
- Fixed Asset Inventory System SA-5
- Budgetary Accounting Package SA-5
- Attendance Accounting Package SA-5
- Grade Activity Accounting Package SA-5
- Central Activity Accounting Package SA-5

Competency Manager™ SA-5
Registrar™ SA-5
Private School/Tuition & Book Accounting SA-6



TITLE: ASSISTANT PRINCIPAL
PUBLISHED BY: MONUMENT COMPUTER SERVICE

ASSISTANT PRINCIPAL is a complete administrative package for high school and junior high schools. The package provides total control of class rosters, student master records, student schedules, teacher assignments, and grade reporting.

The system allows the school administrator to design student input documents, enter students onto the system, schedule their classes, print class rosters, accept grades and test scores, print report cards, print file folder labels and prepare student master records. The system automatically prints ranked class lists and records attendance information.

The system requires two disk drives and Applesoft in ROM. The system is provided on seven diskettes with a two volume operating manual for $500.00. The operating manuals are available separately at $50.00.

TITLE: ATTENDANCE RECORDS FOR TEACHERS
PUBLISHED BY: COMPUTER HOUSE DIV.

Record and review any teachers name and absence information. Generates seven reports, including tabulations of the number of absences by weekday, by date, by reason for each month, and by length of absence. Also printed out, is a listing of teachers names and their absence information. Prints a notification report for an individual teacher when the maximum number of absences are exceeded for certain reasons.

PRICE: $250.00

TITLE: ATTENDANCE FOR STUDENTS
PUBLISHED BY: COMPUTER HOUSE DIV.

Record & review all students by number. Reports showing; name, address, phone, grade, school, times absent by reason and date. Prints dismissal notice when maximum number of absences are exceeded.

PRICE: $145.00

TITLE: THE CLASS SCHEDULING SYSTEM
PUBLISHED BY: CHARLES MANN & ASSOCIATES

The Class Scheduling System prepares all input forms, reports expected class conflicts, and prepares final master school rosters and individual student schedules. The system is designed to optionally interface with CMA's The Grading Systems Programs (a grade reporting and report card printing system) and The Counsellor's Program (a student record and file organization system.)

The scheduling system allows the school to define required courses, if any, and prepare individual student input forms for upcoming semesters, quarters or trimesters. Students, with counsellor or homeroom assistance can prepare the student request forms including optional and alternative course desires. The counsellors can assign priorities for required courses, prerequisites or for units required for graduation this period.

The system will examine the student requests and proposed course offerings to prepare reports on class loads and potential conflicts. The system has several established methods of prioritization to allow for the best overall matching of needs and available courses and sections. Once an acceptable solution is found, the system will schedule courses, study halls, and lunch periods to create the master school class rosters and individual student schedules. The magnetic output can optionally be used in CMA's grading system and

counsellor packages.
The user can define the inclusion of study halls or lunch periods and assign one of several methods to be used in their scheduling. The system can be programmed to override conflicts under prescribed conditions and the system will allow hand fitting of courses after computer scheduling has been accomplished.
The system will handle up to 2,400 students at a time. Up to 1,000 courses are possible with up to 16 choices and alternates per student. The system requires 48K and two disk drives along with a 80 column printer.
PRICE: $249.95

TITLE: COUNSELLOR'S PACKAGE
PUBLISHED BY: CHARLES MANN & ASSOCIATES

The program package, which operates in conjunction with CMA's The Grading System Programs, allows for the preparation of the school guidance counsellor's master student records and file folder labels.
The system reads the Grading System Program's master student records and prepares semester-by-semester summaries of student grades. The system can be used to update counsellor files at each quarter or semester and obtain details as necesary including teacher progress comments. The system also prints updated student file folder labels which include such information as the student's current class-by-class grade average. The system is designed to prepare all necessary information for career guidance and recommendations on additional course work required.
PRICE: $89.95

TITLE: SCHOOL BUS ROUTING MADE EASY
PUBLISHED BY: COMPUTER HOUSE DIV.

Accepts entry of any number of students including; name, address, phone, zip code, grade and student number.
Accepts up to 99 buses by number, drivers name, address and phone, prints various reports e.g., drivers printout will show all students for each pickup point, pickup time, pickup location. Each pickup point and its related information is separated and all pickup points are listed in order. Anyone familar with the street names could substitute for the driver easily.
PRICE: $225.00

TITLE: CLASS MANAGEMENT
PUBLISHED BY: EDUCATIONAL ACTIVITIES

These two programs have been developed to help the teacher with day-to-day work. Readability Index enables the teacher to determine the reading level of any text. Grade Averages allows the teacher to calculate students' grade average by using both numeric and letter grades (without any previous conversion.

TITLE: STUDY-QUIZ FILES
PUBLISHED BY: EDUCATIONAL SOFTWARE

This self-explanatory program allows you to create and run study quizes, save them on the disc and retrieve them at will. Many quizes can be stored on this one disc. Review your items, revise them, add items, delete items without any computer-programming knowledge. Written by a licensed psychologist, the

program includes random question presentation, reinforcement at the end of each question, a final score summary and a color congratulations display at the end.

PRICE: DISK, 19.95

TITLE: THE TEACHING MACHINE
PUBLISHED BY: PROGRAM DESIGN

Series of programs showing the uses and values of educational software and containing actual samples of PDI's educational programs.

PRICE: DISK or TAPE, 5.00

TITLE: APPLE TEACHER
PUBLISHED BY: CREATIVE

A universal teaching program. You set up the lesson and the Apple does the rest.

PRICE: TAPE or DISK, 24.95

TITLE: APPLE GRADE BOOK
PUBLISHED BY: J & S SOFTWARE

Complete grade & attendance record for entire class, with types of activities & individual & collective average. Disk 32K with Applesoft Card.

PRICE: $29.50



TITLE: EDUCATIONAL MANAGEMENT
PUBLISHED BY: DPC

SPECIAL EDUCATION ADMINISTRATIVE PACKAGE

Student data, Inventory of Exceptionalities, Supplemental Services and Dates
Teacher Class Rosters
Reports totals & averages of days until diagnosis and placement
Students printed by specific catagory.
PRICE: $275.00

IMMUNIZATION ADMINISTRATIVE PACKAGE

Personal student data & dates for 6-DPT, 5-Polio, Rubiola, Rubella, and Mumps
Automatically calculates next shot date
Prints overdue immunization list by grade.
PRICE: $275.00

FIXED ASSET INVENTORY SYSTEM

Full maintenance — Addressed by tag #
Reports titled by operator
Full descriptive data retained — P.O. #, Model Serial #, Repairs, Appraisal, etc.
Prints single record, Selected range, or all records; also prints on cards
PRICE: $275.00

BUDGETARY ACCOUNTING PACKAGE

PRICE: $375.00

ATTENDANCE ACCOUNTING PACKAGE

PRICE: $275.00

GRADE ACCOUNTING PACKAGE

Report cards and Student transcript labels
PRICE: $300.00

CENTRAL ACTIVITY ACCOUNTING PACKAGE

PRICE: $375.00

TITLE: COMPETENCY MANAGER™
PUBLISHED BY: OMNICO

COUNSELORS can keep timely and accurate records of student progress with the computer files available in this management program. Although there is a fairly common set of competencies that students need to achieve, no one set can serve all schools. Each school can define its own set with the Competency Manager. Provision is made for automatically generating letters to students or parents containing the student's status.
PRICE: $550

TITLE: REGISTRAR™
PUBLISHED BY: OMNICO

REGISTRATION SYSTEM to automate the conventional registration process for high schools. It closely emulates ordinary procedures making the transition from manual to computerized registration quick and easy. Class rolls and student schedules are automatically generated. Requires 48k Apple Plus with dual drivers.
PRICE: $650

TITLE: PRIVATE SCHOOL/TUITION & BOOK ACCOUNTING
PUBLISHED BY: VITAL INFORMATION

Designed for private school who charge tuition, sell or rent books. Keeps track of up to 25 books per student, up to 250 students per diskette. Makes it easy to close out the year end as well as open the school year.

PRICE: $75.00

STOCK MARKETS PROGRAMS

ANA1 ..... SK-1
Annual Report Analyzer SK-1
Bonds SK-1
Commodity File SK-1
Portfolio Evaluator SK-2
Security Analysis SK-2
Security Charting SK-2
Stock Options SK-2
Stock Option Valuation SK-2
Stock Portfolio SK-3
Stock Tracker SK-3
Market Charter™ SK-4
Cyber-Tech Stock Valuation Program SK-5



TITLE: ANA1
PUBLISHED BY: GALAXY

ANA1 (ANALYSIS 1) is a set of BASIC programs which enables the user to perform analyses on the Dow Jones Industrial weekly average data, beginning with the year 1897. From 6 months to 5 years of user selected DJI data can be plotted on the entire screen in one of 5 colors, using Apple's High Resolution capabilities. The DJI data can be transformed into different colored graphic representations called transforms. They are: user specified moving averages; a least squares linear fit (best straight line); filters for time, magnitude, or percentage changes; and user created relationships between the DJI data, a transform, or a constant using +, —, *, / operators. Colored lines can be drawn between graphic points. Graphic data values or their dates of occurrence can be displayed in text on the screen. Any graph or text can be directed to a printer. The Grid Scale is automatically set to the range of the graphs or can be user changed. As many colored graphs as wanted can be plotted on the screen and cleared at any time. The user can code routines to operate on the DJI/transform data or create his own disk file data base. ANA1 commands can be used with his routines or data base. An Update program allows the user to easily update the DJI file with current DJI weekly data. Includes manual. APPLESOFT ROM. 48K.

PRICE: DISK $49.95

TITLE: ANNUAL REPORT ANALYZER
PUBLISHED BY UNITED SOFTWARE OF AMERICA

Provides 5-year profile of stock performance. 8-32K.
PRICE: $22.95

TITLE: BONDS
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

A variety of bond programs to calculate interest and yield to maturity, present and future value, effective yield and basis price. 8-32K.
PRICE $12.95

TITLE: COMMODITY FILE
PUBLISHED BY: MIND

Commodity File stores and retrieves virtually every commodity traded on all Future's exchanges. A self-prompting program allowing the user to enter short/long contracts. Computes gross and net profits/losses, and maintains a running cash balance. Takes into account any amending of cash balances such as new deposits or withdrawals from the account. Instantaneous readouts (CRT or printer) of contracts on file, cash balances, P/L statement. Includes color bar graphs depicting cumulative and individual transactions. Also includes routine to proofread contracts before filing.

PRICE: DISK $19.95

TITLE: PORTFOLIO EVALUATOR
PUBLISHED BY: APPLE
MEMORY; 32K RAM
HARDWARE: DISK II

Maintain up to 50 stock portfolios on a diskette, analyzing each to provide summaries of short and long term gains and losses, current values of each portfolio, and shares held.
PRICE: DISK, 50.00

TITLE: SECURITY ANALYSIS
PUBLISHED BY: GEORGE HALLER

This package will list and analyze a portfolio of securities by name, number of shares, cost per share, dividend per share, and recent quote. The program starts by allowing a choice of three alternate presentations.

*The first alternate presentation presents the total value of each security and then the total value of the portfolio.

*The second alternate presentation lists the name, number of shares, the cost, value and gain or loss of each security and the total of the latter three items for the portfolio.

The third presentation present the analysis of the dividends by showing for each security the percent dividend to cost, the percent to value and the dollar value of the dividend and then the same data for the entire portfolio. Provisions are made for adding date and DOW JONES Average. The TRS-80 with LEVEL I BASIC and 4K memory will handle about 35 different securities at one pass. Securities can be added, deleted, and modified easily and the program has been written for especially quick change of quoted stock value. This program is similar to that described by the author in KILOBAUD Dec. 77, page 90. Includes Golf Handicap.

PRICE: Cassette 10.00
Disk 15.00

TITLE: SECURITY CHARTING
PUBLISHED BY: PROGRAMMA

This program is geared towards the stock investor. Stocks can be entered day by day or week by week, and can be graphed, in Hi-res on a 4, 9 or 14 day moving average.
PRICE: DISK, 79.95

TITLE: STOCK OPTIONS
PUBLISHED BY: UNITED SOFTWARE OF AMERICA

Follows Black-Scholes model for computing theoretical value of a call option. 8-32K.
PRICE: $24.95

TITLE: STOCK OPTION VALUATION
PUBLISHED BY: THE INSTITUTE FOR ECONOMETRIC RESEARCH

The Stock Option Valuation program is an easy to use, completely interactive program that will enable the user to quickly calculate fair market values for put and call options and stock warrants. Values for call options and warrants are derived from the "Merton Model" which is an adaption of the classical "Black-Scholes Model," developed at the University of Chicago. However, the Merton Model significantly improves upon the Black-Scholes variation by considering the dividend yield of the underlying common stock. Valuation of put options

uses the Merton Model as modified by a standard formula such as that proposed by the New York Institute of Finance. To facilitate comparisons and permit construction of spread and straddle positions, the Stock Option Valuation program values two options simultaneously. Total execution time is less than two seconds. Input parameters include the price, dividend yield, and volatility of the underlying common stock, the exercise price of the option, and a market interest rate. An accompanying explanatory brochure assists the user in locating volatility estimates for common stocks.
PRICE: $29.95 Tape

TITLE: STOCK PORTFOLIO
PUBLISHED BY: HOWARD SOFTWARE
Records and analyzes price history for individual stocks as well as entire portfolio. Disk based for easy storage and retrieval.
PRICE: DISK 19.00

TITLE: STOCK TRACKER
PUBLISHED BY: H & H TRADING COMPANY
A powerful, volume-based analysis program to compute buy, sell and hold recommendations on stocks, options and commodities, with fully editable disk data files in CP/M version programmed by MICRO-AP.
Available in these disk drive formats:
8" IBM Soft Sector, Single Density
8" Dynabyte Single or Double Density
5¼" Dynabyte Soft Sector
5¼" North Star Double Density
5¼" Micropolis MOD II
REQUIRES: MN 52K CP/M 1.4 or higher operating system. CBASIC 2.05 or higher, 1 or more disk drives, 24Lx80C or larger cursor-addressable terminal.
ALSO AVAILABLE: APPLE II or APPLE II PLUS version (MN 32K RAM, 1 or more disks, and APPLESOFT card or language system)
PRICE: $150.00 APPLE or TRS-80 Versions complete
15.00 Any manual alone.



TITLE: MARKET CHARTER™
PUBLISHED BY: RTR SOFTWARE, INC.

Stock charting on your Apple II
High-Low Close Bar Charts
Simple, Exponential, Weighted Averages
Trendlines, Resistance Lines, etc.
Volume Charts with average volume
Hard Copy of the Charts and Data
Comparison Charts
Weekly & Daily Stock Histories available
User Oriented
User can create and update the Data base
Many Satisfied Users
Manual, Demo Diskette and Stock Histories are available separately. Call or write for information on new offering in the financial field.
PRICE: $129.95

TITLE: CYBER—TECH STOCK VALUATION PROGRAM
PUBLISHED BY: CYBER-TECH

NOW the home computer owner can have the same analytical techniques used by the TOP PROFESSIONAL MONEY MANAGERS. CYBER-TECH now offers a Stock Valuation Program based on Modern Portfolio Theory which provides logical computerized criteria for identifying undervalued stocks.

Is based on a model developed by Wells Fargo Bank, an acknowledged leader in pension fund management.

Takes the average investor out ot the age of MYSTERY, MAGIC and VOODOO and into the age of SCIENCE.

Comes with a 22-page printed INSTRUCTION MANUAL which explains the operation of the program, provides background theory and analyzes two separate stocks.

Input data required for program operation can be obtained from investment periodicals such as Value Line Investment Survey.

Output consists of expected DIVIDENDS, EARNINGS, GROWTH RATES, PAYOUT RATIOS, the INTERNAL RATE OF RETURN over a MULTI-YEAR PERIOD and a COMPUTERIZED RISK ADJUSTED STOCK-ATTRACTIVENESS RATING.

Since the purchase of this program is an investment expense, the FULL PRICE of your CYBER-TECH STOCK VALUATION PROGRAM IS TAX DEDUCTIBLE.

PRICE: $49.95



TITLE: CARE OF FLOPPY DISKS
PUBLISHED BY: G. VAN DIVER

Floppy disks, which are also called 'diskettes,' are not expected to have the same type of reliability as a hard disk. However, with proper care they do provide good usage. They have a reasonable access time (the time it takes for data to appear on the terminal) and are inexpensive.

We have contacted a number of people, including some disk manufacturers, about the care of floppy disks. Following is a brief summary of the best information we obtained.

Components. A floppy disk consists of a circular disk which looks much like a 45 rpm record. However, the disk is actually flexible, which is where the term 'floppy' comes from. There are two sizes — a standard eight inch and a five and one-quarter inch mini-floppy. The disk is permanently encased in a stiff protective jacket. The jacket has a label on it for identifying the contents of the record. We will discuss this in more detail below.

What is proper care? Floppy disks should be treated with respect — like a good book or favorite record. We have heard some manufacturers say they are horrified to find people using the disks as coasters for coffee cups. Also, be sure not to touch the surface of the disk which shows through the slots in the protective jacket. Smoke, dust, dirt or pencil erasures will also contaminate the surface. If a contaminated disk is used, it may contaminate the read and write head in the disk drive (the unit which rotates the disk). If this becomes dirty, it can contaminate the next disk used. This can result in a loss of data on the disk.

Keep the disk away from magnetic fields so data is not erased. If disks come into contact with magnetic articles such as the latches on cabinets or magnetic paper clip holders, defects ranging from minor dropouts (missing data bits) to major destruction of data can result.

When inserting or removing the disk into or from the disk drive, be sure to handle the disk carefully, without bending or forcing it. Forcing can cause damage to both the disk and the drive. Also, new operators should always be told how to insert disks; the proper orientation is not obvious.

Storage and cleaning. Keep disks comfortable by not exposing them to strong sunlight or other sources of heat. Manufacturers recommend that the operating environment for floppy disks be maintained at 70 to 75 degrees F (21 to 24 C) and 40 to 50 percent relative humidity. For long term storage of floppy disks, the ranges are 50 to 125 degrees F (10 to 52 C). The storage should not be subject to dampness, as this can cause warping. The relative humidity should be from 8 to 80 percent. In the case of both temperature and humidity, the closer to the center of the range, the better. When bringing disks from storage to the operating environment, the conditioning time is relatively short — say, from 5 to 15 minutes.

Vertical storage is recommended over stacking, as this too helps prevent warping. There are several types of storage equipment available, such as vinyl envelopes, binders and cases. There are also polystyrene cases available for archival storage.

Cleaning is done by the jacket itself. Extra cleaning by users is not necessary and could cause damage. If used for archival storage for some time, you may want to take the disks out and run them on the disk drive to clean them. At a recent conference we attended, it was suggested that once a year should be sufficient for this purpose.

For daily use, be sure to put the floppies back in the storage envelopes when not in use, unless you are using one of the special holders mentioned above.

Lebeling. Avoid putting pressure on a disk, either by setting something on it or writing on it with a hard point pen or pencil. To write on the label, use a felt tip pen and write gently. Further, we suggest that only the reference number should be written on the label. Put the same reference number on the storage envelope

and write the contents on the envelope. If you are using special storage devices, they come with special provisions for listing contents.

Mailing. When mailing floppy disks, they should have as much care (if not more) than regular handling. You will not want them bent, crushed, over-heated, or subjected to extreme temperatures. Special cartons are available which are sturdy and hold the floppies in place during shipment.

With good care your floppy disks should provide you with good reliability.

So ... **RAM** on.

SUPPLIES

STORAGE MEDIA

Dysan Soft Sectored, 104/1 (box of 25) .....
Dysan Hard Sectored, 10 hole, 107/1 (box of 25) .....
Dysan Hard Sectored, 16 hole, 105/1 (box of 25) .....
Dysan Soft Sectored, 104/1 (box of 100) .....
Dysan Hard Sectored, 10 hole, 107/1 (box of 100) .....
Dysan Hard Sectored, 16 hole, 105/1 (box of 100) .....
Microsette 50 foot cassette (box of 10) .....
Microsette 50 foot cassette (box of 100) .....
TBS cassette (box of 10) .....
TBS cassette (box of 100) .....
Verbatim Digital Cassette, 50 foot,
C-10 (box of 10) .....
Verbatim Digital Cassette, 50 foot,
C-10 (box of 100) .....
Verbatim Digital Cassette, 300 foot (box of 10) .....
Verbatim Digital Cassette, 300 foot (box of 100) .....
Verbatim Soft Sectored, MD525-01 (box of 10) .....
Verbatim Hard Sectored, (MD525-10 (box of 10) .....
Verbatim Hard Sectored, (MD525-16 (box of 10) .....
Verbatim Soft Sectored, MD525-01 (box of 100) .....
Verbatim Hard Sectored, MD525-10 (box of 100) .....
Verbatim Hard Sectored, MD525-16 (box of 100) .....
Wabash Soft Sectored, heat resistant,
T45 (box of 10) .....
Wabash Soft Sectored, heat resistant,
T45 (box of 100) .....

STORAGE ACCESSORIES

Mini disk storage boxes, holds 10 minidisks .....
Minidisk three-ring binder inserts (package of
10, holds 20 diskettes) .....
Track back 3-ring 12-cassette binder .....
Track back 12-cassette insert .....
Stowaway cassette storage unit, rotary holds 32
cassettes .....
Cassette storage library, push button retrieval,
holds 15 cassettes .....
Deluxe cassette storage cabinet, walnut finish,
holds 36 cassettes .....
Tape storage center - holds 72 cassettes .....
Cassette file system, fits letter or legal size file
cabinets, holds 16 cassettes .....
Portable cassette storage cabinet, holds 15
cassettes .....
Cassette Pack 12, compact cassette box, holds
12 cassettes .....
Head maintenance kit, cleaning agent, mirror
and cleaning wand .....
Head cleaner cassette .....
Head demagnetizer, battery operated .....
Disk and document holder for 3-rint binder
(package of 10) .....
Vertical file disk holders, holds 2 diskettes

with labels .....
Mini disk holder for 3-ring binder (package of 10) .....
Mini disk storage tray, metal tray with index dividers and dust cover, holds 50 disks .....
Self adhesive diskette storage pocket (package of 10) .....
Diskette folder - 2 pocket manila folder w/mini disk pocket attached (package of 10) .....
Diskette folder - 4 pocket manila folder w/mini disk pocket attached (package of 10) .....
Easel binder, 3-ring notebook opens to form stand (holds 10 diske tes) .....
Vinyl binder, 3-ring binder for 8½x11 sheets, plastic slide closure .....
Diskette/cassette numeric index labels (25 sets of 3 labels for filing) .....

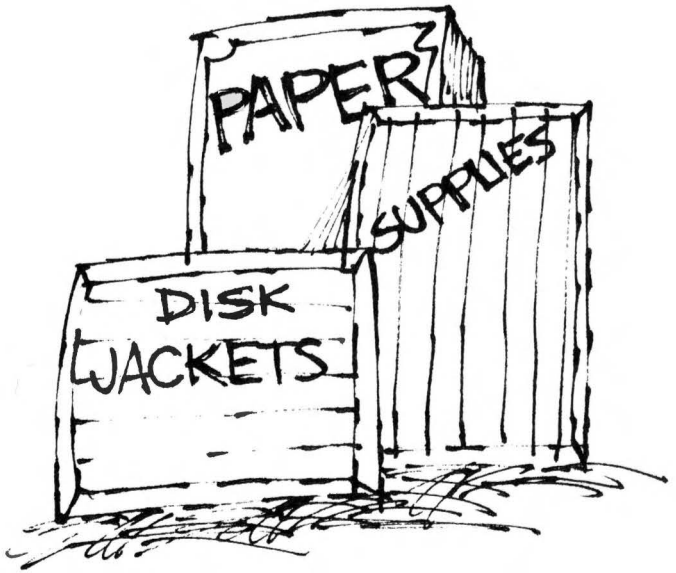
PRINTER PAPER, RIBBONS & PRINT WHEELS

Teletype Rolls .....
80 column tractor feed, 3200 sheets, green bars .....
132 column tractor feed, 15 lb, green bars, 14-7/8x11 .....
Fanfold 8½x12 for TTY 43 .....
Paper roll for TI 743, 100 feet .....
Fanfold 8½x11 for IP225 or IP440 with green bars .....
Fanfold 8½x11 for IP225 or IP440 with no bars .....
132 column tractor fee, 15 lb, blue bars, 14-7/8x11 .....
Box of 5 paper rolls for Printer II (Centronics Micro P1) .....
Paper roll for IP125, 186 feet x 8½ .....
Paper roll for Comprint 912P, 912S .....
Paper roll for Axiom EX 820 .....
8½ inch green bar 2 part fanfold paper, 1400 sheets .....
8½ inch green bar 3 part fanfold paper, 900 sheets .....
8½ inch green bar 4 part fanfold paper, 750 sheets .....
9½ inch green bar 2 part fanfold paper, 1400 sheets .....
9½ inch green bar 3 part fanfold paper, 900 sheets .....
9½ inch green bar 4 part fanfold paper, 750 sheets .....
Full size 1 part fanfold musicbar paper, 3500 sheets .....
Full size 2 part fanfold musicbar paper, 1400 sheets .....
Full size 3 part fanfold musicbar paper, 900 sheets .....
9½ inch blank 1 part fanfold paper, 3500 sheets .....
9½ inch blank 2 part fanfold paper, 1400 sheets .....
9½ inch blank 3 part fanfold paper, 900 sheets .....
Daisy Wheel print wheel for Diablo, Courier 72 .....

Daisy Wheel print wheel for Diablo 1650, metal .....
Diablo Cloth ribbon for Daisy Wheel printers .....
Diablo Cloth ribbon for Matrix 2300 printer .....
Diablo Multi-strike carbon ribbon for Daisy Wheel printers .....
Teletype Model 43 Ribbon .....
Teletype Model 40 Ribbon .....
Ribbon and Inking Roller set for IP125, IP225 and IP440 .....
Ribbon and Centronics 779 or Printer IIA (Apple) .....
Thimble, Courier 72 for Spinwriter .....
Thimble, PICA 10, French for Spinwriter .....
Multi-strike carbon ribbon for Spinwriter .....
Cloth ribbon for Spinwriter .....

TITLE: VINYL DISKETTE HOLDERS (10 per pack)
PUBLISHED BY: COMPUTER STATIONS, INC.

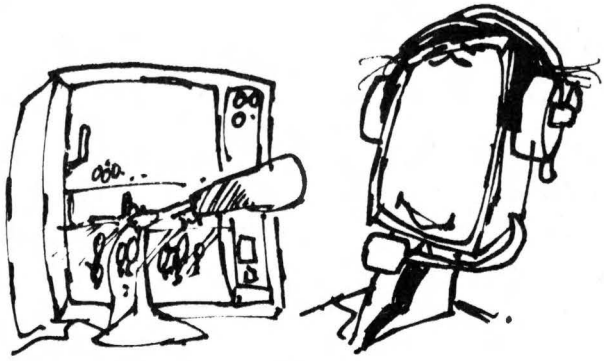
These vinyl diskette holders fit into any three ring binder. Each holds two 5 1/4" diskettes and each pack of ten is supplied with 20 index cards to provide a terrific means of safely storing and organizing diskettes.
PRICE: $7.50



STRATEGY GAMES

Adam's Odyssey SG-1
Adventure SG-1
Adventure SG-1
Air Flight Simulation SG-1
Akalabeth SG-2
B-1 Nuclear Bomber SG-2
Backgammon SG-2
Battle of Midway SG-2
Battlestar 1 ..... SG-2
Beneath Apple Manor SG-2
Beneath the Pyramids SG-3
Bill Budge's Trilogy of Games SG-3
Black Stars SG-4
Blast/Space Battle SG-4
Bloody Murder SG-4
Bridge 2.0 ..... SG-4
Bridge Challenger SG-4
Chess SG-5
Compubridge SG-5
Computer Air Combat SG-5
Computer Ambush SG-5
Computer Bismark SG-5
Computer Conflict SG-6
Computer Napoleonics SG-6
Computer Quarterback SG-7
Count, The SG-7
Datestones of Ryn SG-8
Demo Program SG-8
Dogfight SG-8
Dungeon Campaign, Adventure SG-9
Earthquest SG-9
Enchanted Island SG-9
Galactic Blockage Runner SG-10
Galactic Empire SG-10
Galactic Quest SG-10
Galactic Revolution SG-10
Galactic Trader SG-11
Galactic Wars SG-11
Galaxy Wars SG-11
Global War SG-12
Haunted House SG-12
Hellfire Warrior SG-12
Hi-Res Adventure SG-13
House of Seven Gables SG-13
House of Usher SG-13
Hyperspace Wars SG-13
Invasion Orion SG-14
Journey SG-14
Journey to Atlantis SG-14
Journey to the Center of the Earth SG-14
King Tut's Tomb SG-15
L.A. Land Monopoly SG-15
Lasar Wars SG-15
Mastermind SG-15
Midway Campaign SG-15

Morloc's Tower SG-16
Mychess SG-16
Mystery House SG-16
North Atlantic Convoy Raider SG-16
Nuclear Reaction SG-17
Nukeware SG-17
Odyssey SG-17
Oil Tycoon SG-17
Oldorf's Revenge SG-18
Olympic Decathlon SG-18
Othello III SG-18
Peg Jump SG-19
Perception Package SG-19
Planet Miners SG-19
Prisoner SG-19
Santa Paravia and Fiumaccio SG-20
Saucer Invasion SG-20
Sargon II SG-20
Sorcerer's Castle SG-20
Space SG-20
Star Cruiser SG-21
Starfleet Orion SG-21
Stimulating Simulations SG-21
Sumer SG-22
Super Dungeon SG-22
Super Starwars SG-22
Tarturian SG-22
Temple of Apshai SG-22
Terrorist SG-23
Three Mile Island SG-23
Torpedo Alley SG-23
Time Traveler SG-23
Trek SG-24
Tuesday Night Football SG-24
UFO SG-24
Ultracheckers SG-24
Wilderness Campaign SG-25
Windfall SG-25
Wizard SG-25
Wonderful World of Eamon SG-25
World of Odyssey SG-26
World War III SG-26



TITLE: ADAMS' ODYSSEY
PUBLISHED BY: ADVENTURE INTERNATIONAL

ITEMS NOW HAVE 3-D-ability (Insides, Outsides, etc.)
MULTI-PLAYER - up to 12 and they can be friend or foe.
UNRESTRICTED COMMANDS - up to full paragraphs!

TITLE: ADVENTURE
PUBLISHED BY: MICROSOFT

If you've ever been lucky enough to play Adventure on a big computer, you know how addictive itis. Fantasy, deduction, and magic all come into play as you explore the changers of Colossal CAve, collecting treasure while avoiding pitfalls and hostile creatures. There are surprises around every corner, and even veteran players keep discovering new things and improving their scores.
Microsoft has the complete microcomputer version of the original FORTRAN Adventure that runs on large timesharing systems. It runs on TRS—80 and Apple II systems with at least 32K memory and one disk.

TITLE: ADVENTURE
PUBLISHED BY: RAINBOW

This is the one you've been waiting for. The same full function game which normally runs on much larger main-frames is now available for Apple II. 64 objects, 140 locations, over 700 travel options. Hours of mind bending thrills and excitement: Will the pirate steal your treasure, will you survive attacks by vicious dwarves, what does "PLUGH" mean? All this and much more with the real Adventure.

PRICE: DISK $29.95

TITLE: AIR FLIGHT SIMULATION
PUBLISHED BY: INSTANT SOFTWARE

Your aircraft is on the runway loaded with fuel, instruments feeding the computer a constant stream of information.
A glance at your flight screen gives you airspeed, altitude, and compass heading. After you take-off, the all important Ascent/Descent-Turn/Bank Indicator will tell you the attitude of your aircraft at a glance, whether you are climbing or diving, whether you are banking into a left or right turn.
Your mission is a short one. You have a maximum possible range of about 50 miles, on one precious tank of fuel. Your objective is to take-off, fly the aircraft, and land without crashing.
You may not have been at the controls of an aircraft before. The basic flight instructions enclosed will be invaluable. Included are explanations on basic aerodynamics and principles of flight, plus illustrations telling you how to recover from dangerous maneuvers.
Your aircraft will respond rapidly to the controls, and your movements must be delicate. Too much airspeed and your aircraft could explode from overstress. If the airspeed is too slow, you might stall and crash. A clumsy turn, and you might find yourself flying upside down, fighting to regain control.
It will take a few hours of flight time, before you can take-off and fly a correct flight plan. By then you will be expert enough to attempt aerobatic maneuvers. With Air Flight Simulation and enough flight time, the sky's the limit!
PRICE: $9.95

TITLE: AKALABETH
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.

A game of fantasy, cunning, and danger. 10 different Hi-Res Monsters combined with perfect perspective and infinite dungeon levels create the world of Akalabeth.
For Apple II w/48K and Applesoft R.O.M.**PRICE: $34.95 on Diskette**

TITLE: B-1 NUCLEAR BOMBER
PUBLISHED BY: THE AVALON HILL GAME COMPANY

This game gives you an opportunity to be the pilot of a B-1 bomber on a mission over the Soviet Union. you must fly the plane through the stiff Russian defenses to the target city, bomb it, and return home. Your computer controls the Soviet air defense bases with their almost unlimited numbers of MiG's (fighters) and SAM's (surface-to-air missiles). Your only chance to get through is to rely on the superior technology of your sophisiticated ECM (electronic counter measures) and self-defense missiles. When all else fails, you can try violent evasive maneuvers.
PRICE: $15 Retail

TITLE: BACKGAMMON
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Wazaney)A classic game of luck and skill played against a preprogrammed opponent. #02501, PET: #02503, TRS-80 Level II;
PRICE: $10.95

TITLE: BATTLE OF MIDWAY
PUBLISHED BY: CREATIVE COMPUTING
MEMORY: 16K

This Pacific battle classic requires strategy and skill.
PRICE: TAPE or DISK, 14.95

TITLE: BATTLESTAR 1
PUBLISHED BY: PROGRAMMA

As Commander of Battlestar 1 your mission is to escape the deadly cylon menace by traveling to the furthest quadrant possible. You start in quadrant Omega 1. There are 2 basestars and 5 cylon interceptors guarding the exit from this quadrant and all others. The paddles control motion and the buttons launch torpedoes and control your thruster.
PRICE: 15.95

TITLE: BENEATH APPLE MANOR
PUBLISHED BY: THE SOFTWARE FACTORY

BENEATH APPLE MANOR (BAM) is a solitaire role playing simulation game, loosely based upon several popular fantasy games such as Dungeons and Dragon, Tunnels and Trolls, etc. BAM allows you to play the role of an adventurer, exploring an underground maze of corridors, rooms, secret passages and the like, killing dangerous monsters and finding rich and powerful treasures. The dungeon complex consists of many floors or levels, each more dangerous than the last, but as you gain experience from vanquishing Green Slimes, Ghosts, and other fearsome critters, your capabilities will rise to meet each new challenge. Finally, in a dragon horde many levels below Apple manor you may even find the ultimate object of your quest, the fabled golden apple of Apple manor.
BAM is similar to the game Adventure but has several important differences.

The dungeon construction is two-dimensional and graphically represented. The monsters are different, each having unique capabilities and movement. Unlike Adventure, which can only be played once, with the thrill of exploration and discovery as well as the satisfaction of advancement, you'll want to play BAM again and again. Although BAM is easy to learn to play, the strategies developed by an experienced player are many and complex.
BAM was written for the Apple II in Integer Basic and 6502 machine language. It consists of two main parts: An initialization program which constructs dungeon floor plans; and a run-time program with which the game is played. The program will run on cassette based systems from 16K and up or on diskette based systems from 32K.
BAM'S ADVANTAGES:
Easy to Learn and Play (Math degree not required) yet non-trivial in its strategies.
Can be tailored to the beginner or the expert adventurer.
Provides thrills of exploration and risk through computer controlled partial information.
Allows player development and advancement during the course of the game.
Carefully playtested. Reliable and well balanced.
Uses apple II color graphics or test graphics at the user's option.
Comes complete with illustrated rule manual, giving background and strategy hints.
PRICE: $15 on Cassette $20 on Diskette

TITLE: BENEATH THE PYRAMIDS
PUBLISHED BY: CRYSTAL COMPUTER MANUFACTURING & SOFTWARE

Crystalsonics-hires graphics - brand new! Explore the pyramids and miles of winding secret tunnels beneath them. Enter at the Sphinx and find the hidden treasure chamber. All in hires with very aggressive monsters and many many perils. To win you must find the golden cat and your way out!!!
48K.
PRICE: $29.95

TITLE: BILL BUDGE'S TRILOGY OF GAMES
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER

Three exceptional Hi-Res graphic action games. The title page is great fun in itself with a gone-crazy pinball. ESCape takes you to the menu where you can select from the following games:
PINBALL - Incredibly realistic flipper action. The best implementation of a pinball game on the Apple yet. Exciting screen action. PINBALL is a one or two player game not to be missed.
SPACE WARS - Replica of a famous arcade game. Two adversary ships in a starfield with a central star around which the battle is waged. Options of light and heavy gravity. Be warned that the central star's gravitation may pull you to your doom. Also has options for screen boundary or wraparound. Sneak up on your opponent thru hyperspace. Running score ... for two players. Superlative graphics.
NIGHT DRIVER - You race down a road on a pitch-black night and as you look out your windsheild, you have only the lane markers to guide you. You steer and shift gears to finish the toughest course in the fastest time. Select from easy to tough with four road options. Fast and tricky.
A wonderful implementation of programming and one of our best sellers.
ASSEMBLY. 32K
PRICE: DISK $29.95

TITLE: BLACK-STARS™
PUBLISHED BY: COMPUTER BUS.
If you enjoyed Microchess you'll love Black-Stars, another New strategy game by Michael O'Toole. The action is fast and furious. Two, three, four or more players utilize the atrategic locations of the Black-Stars to cpture and recapture areas on the space grid. Every game is differnt. Sure to be a classic.
PRICE: 14.95

TITLE: BLAST/SPACE BATTLE
PUBLISHED BY: RAINBOW COMPUTING
BLAST: A two player, paddle controlled game. One person aims and fires a gun, while the other moves a space ship so as not to get blasted. After 25 shots, the players' roles reverse. The program allows selection of ship size and speed, keeps score, and declares a winner.
SPACE BATTLE: In this two player game, both players use their paddles to maneuver space ships. The paddle button is used to fire at each other's ships. The object is to deplete your opponent's ship of its energy and then blow it up. Both games are fast & have good Hi-Res graphics.
INTEGER/ASSEMBLY. 16K.
PRICE: TAPE $14.95

TITLE: BLOODY MURDER
PUBLISHED BY: ARTHUR WELLS
A 2-player knife fight-rated "R" for violence!
Great hi-res color graphics
Fast animation
Gruesome sound effects and visuals
3 levels of play
Play it with someone you hate!
PRICE: 19.95

TITLE: BRIDGE 2.0
PUBLISHED BY: DYNACOMP, INC.
An all-inclusive version of this most popular of card games. This progam both BIDS and PLAYS either contract or duplicate bridge. Depending on the contract, your computer opponents will either play the offense OR defense. If you bid too high the computer will double your contract! BRIDGE 2.0 provides challenging entertainment for advanced players and is an excellent learning tool for the bridge novice.
PRICE: $17.95 postpaid

TITLE: BRIDGE CHALLENGER
PUBLISHED BY: POWERSOFT
If you like to play bridge but have trouble getting four people together to play, or you would just like to practice a little to improve your play, this program is for you. With Bridge Challenger, you and the dummy play against the computer in regular contract bridge. You can let the computer deal or set up hands for study or practice play and save them on cassette. Standard bridge notation like those found in books and newspaper columns are used to help you analyze the hands. Complete instructions including an introduction to bridge for the novice, are included in six pages of documentation. Also included on the same cassette is a 3D tic-tac-toe.
16K.
PRICE: $14.95

TITLE: CHESS
PUBLISHED BY: APPLE COMPUTER
MEMORY: 16K
Try your skill at this ancient game of strategy. Plays at eight levels of skill, so you're always evenly matched.
PRICE: DISK, 25.00
TAPE, 20.00

TITLE: COMPUBRIDGE
PUBLISHED BY: BARCLAY BRIDGE SUPPLIES, INC., DISTRIBUTOR
Each course includes a series of programmed lessons plus the unique QUIZ-MAKER which deals random hands for exercises on point count, opening bids, resonses and rebids, then checks your answers and quizzes you or supplies the correct answer. The complete course includes popular conventions such as Stayman and Jacoby Transfers.
Both courses start from the vocabulary and mechanics of the game and then progress to point count, opening bids, responses, rebids, opening leads and declarer play. The complete course includes common conventions and goes into greater detail on responses, forcing bids, doubles and overcalls.
16-32-48K.

TITLE: COMPUTER AIR COMBAT
PUBLISHED BY: STRATEGIC SIMULATIONS INC.
Computer Air Combat is a complex game of plane-to-plane combat in World War II. By choosing among 36 different aircraft representing four major countries, the players may set up an infinite number of challenging situations. This game has the internal complexities of Computer Bismarck, but it is easily learned and quickly played — with an average game lasting between 15 minutes and 2 hours.
PRICE: $39.95

TITLE: COMPUTER AMBUSH
PUBLISHED BY: STRATEGIC SIMULATIONS
Strategic Simulations announces Computer Ambush for Apple II or Apple II Plus. The game features everything needed to simulate World War II squad combat, including a hi-res display of a French Village.
PRICE: $59.95

TITLE: COMPUTER BISMARCK
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.
Historical wargaming may be the only intellectual hobby which creates more intensely devoted fanatics than home computing. When two wargamers spend an evening refighting a famous battle, they'll spend several hours happily setting up the gameboard, firepower charts, unit strength tables and so forth ... all before the first shot can be fired! There are such paper & pencil simulations of every famous battle from Shiloh to El Alamein. If you've ever tried one, you already know the excitement and challenge of trying to be a better general than Rommel.

HOME COMPUTER
Now there's a true historical wargame for your home computer. Computer Bismarck accurately simulates the epic battle between the awesome German battleship and the British Home Fleet. Best of all, the computer program eliminates the drudgery of paper & pencil wargames — remembering all the rules and details while keeping track of the battle on a North Atlantic map on your video display.
PLAY THE COMPUTER
It maneuvers the Bismarck and U-boat wolfpacks so well that you'll have to command the British ships and aircraft brilliantly to avoid losing your merchant convoys (and World War Two along with them).
PLAY A HUMAN
Just like Staff Officer training at the War College, each of you plots his strategies in grease pencil on an off-screen mapboard while the battle is fought on the video screen (monochrome or multicolor depending on your display capabilities). You deploy battleships, cruisers, carriers, destroyers, submarines, oilers, merchant ships, recon planes, and bombers — each with unique and realistic operating parameters. You must deal with all the variables which challenge an actual battle commander: aircraft endurance; naval fuel, firepower and damage; shadowing and searching ability (better in radar-equipped vessels); and visibility — which depends on weather, which varies with geography and time. If a game is interrupted, the program will save it on a minidisc.
MORE LIKE CHESS THAN PONG
Computer Bismarck is a test of intellect and courage rather than hand-eye coordination. If you can imagine playing chess with pieces like a knight who must return to the stables periodically for a fresh horse or a queen whose radius of action can be affected by battle damage ... all on a 360 square chessboard partially obscured by thunderstorms and fog ... that's Computer Bismarck!
PRICE: $59.95 and an Apple

TITLE: COMPUTER CONFLICT
PUBLISHED BY: STRATEGIC SIMULATIONS INC.
Computer Conflict actually consists of two fast-moving wargames of modern warfare, REBEL FORCE and RED ATTACK!, both of which can be enjoyed by wargamers and non-wargamers alike. Using hi-res hexagonal mapboards and realistic unit silhouettes, these games are the most colorful strategy games we have produced to date. Both games can be played in less than one hour, and the set will appeal to all you regular game customers.
PRICE: $39.95

TITLE: COMPUTER NAPOLEONICS
PUBLISHED BY: STRATEGIC SIMULATIONS INC.
COMPUTER NAPOLEONICS takes you to the battlefields of Waterloo on the fateful day of June 18, 1815. Here, the greatest battle ever fought is about to begin, awaiting only your commands to set the amassed armies in motion.
You and your friend choose your role — either as the military genious, Napoleon, or as the Duke of Wellington, the iron-willed leader of the Anglo-Allied forces. The video screen displays the map of the Belgian countryside with the artillery, infantry, and cavalry units under your respective commands.
As Napoleon, you must utilize your superior combat strength and numbers to deal Wellington a quick and decisive defeat before his Prussian ally can supply reinforcements. Speed is of the essence. But any tactical blunders in military deployment will result in a repeat of history — Napoleon's ignominious defeat.
AS THE DUKE OF WELLINGTON, you must not only survive the onslaught of the French artillery, cuirassiers, and the dreaded Imperial Guard, you must also inflict sufficient damage to Napoleon's forces to prevent his relentless northward march of conquest.

THE COMPUTER, in our solitaire scenario, plays Wellington while you play Napoleon. Two levels of play are provided by making the entry of Prussian reinforcements variable. This makes the need for French military decisiveness and devastating execution even more critical.
FOR THE NOVICE AND THE ADVANCED. Computer Napoleonics has all the advantages of your basic, traditional wargame — meticulous detail, realism, and playability. Plus one. Because the computer keeps track of all the rules, neither player can make an illegal move. This makes learning it a cinch (mastery is quite another matter), and it will convert the novice wargamer into a fanatic in no time. The advanced wargamer will find the computer a worthy opponent indeed, and the two levels of play in the solitaire version will challenge the most experienced of strategists.
PRICE: $59.95

TITLE: COMPUTER QUARTERBACK
PUBLISHED BY: STRATEGIC SIMULATIONS INC.

COMPUTER QUARTERBACK propels you onto the playing field of the Super Bowl. From its multiple offensive and defensive plays and its real-time playing conditions to the animated video display of the gridiron and the halftime statistics, no strategy football game has ever been more complete in detail or as exciting in realism. Three versions are offered: Semi-Pro, Pro, and Computer-as-Opponent.
SEMI-PRO presents you with a choice of 18 offenses and 14 defenses. Here you will begin to learn the intricacies of football; the thrill of the perfectly executed two-minute drill; the agony of the fumble, interception, and penalty. On offense, you will learn to read the defense and call audibles as needed.
After you have mastered the Semi-Pro version, it's time to move on to the Big Time ... the Pro version!
THE PRO VERSION not only gives you every offense (36) and defense (24 plus double-teaming capabilities and special alignments) you could ever want, it also gives you the team you want! With 2.7 million computer dollars, you get to draft a team to your style and specifications. Spend more on your quarterback and receivers and your passing game may very well be unstoppable ... but your running game may suffer for lack of funds.
THE COMPUTER eliminates all the organizational drudgery of conventional board games. It plays scorekeeper, referee, umpire, and linesman. As timekeeper, referee, umpire, and linesman. As timekeeper, it makes you play in real-time. Take longer than 30 seconds to hike the ball and five yards will be marched off against you for delay-of-game.
"THE ROBOTS" is the team most ably coached by your friendly computer. It's ready to play any time you are. It even "learns" your tendencies and patterns through time, and it will make the necessary tactical adjustments. It plays so well you must be in top form to stand a chance against it.
PRICE: $39.95

TITLE: THE COUNT
PUBLISHED BY: ADVENTURE
MEMORY: 24K

THE COUNT—You wake up in a large brass bed in a castle somewhere in Transylvania. Who are you, what are you doing here, and WHY did the postman deliver a bottle of blood? You'll love this Adventure, in fact, you might say its LOVE AT FIRST BYTE....
PRICE: Tape, $14.95

TITLE: THE DATESTONES OF RYN Dunjon Quest #2
PUBLISHED BY: AUTOMATED SIMULATIONS

Take this opportunity to introduce yourself to the "DunjonQuest" series. A dastardly robber band led by the notorious rogue, Rex the Reaver, has stolen the precious Datestones from the ducal calendar. Your mission is to recover the datestones before Rex and his cutthroats can slip away. You're working against the clock to retrieve the stolen treasures. Not only do the real-time monsters keep you on the edge of your seat, but you must finish your quest before the sun sets! Explore the cave complex where the robbers have taken refuge, but watch out for the other inhabitants of the warren.

The built-in competitive scoring system of "Datestones of Ryn" measures how well you do in successive playings and allows you to test your prowess against that of your friends. Can you snatch every last Datestone from the robbers' grasp?

Minimum Configuration Requirements:

APPLE Cassette: 32K with APPLESOFT in ROM or 48K with APPLESOFT on cassette

APPLE Disk: 48K with APPLESOFT in ROM

Rating: Introductory complexity ... easy to play ... 20 min. playing time.

PRICE $14.95 Cassette $19.95 Disk

TITLE: DEMO PROGRAM
PUBLISHED BY: MAD HATTER SOFTWARE

This is a great program for showing off your computer. It emulates museum computer exhibit. Chatty and personal, it plays several games and gives a math test in addition, subtraction, multiplication, and division, with a score when finished. The games played are - Guess my number, Craps and Tic-Tac-Toe.

PRICE: $7.95

TITLE: DOGFIGHT
PUBLISHED BY: MICRO LAB

A NEW CHALLENGE

DOGFIGHT will capture your imagination. You are the pilot of a jet going into combat. You may fly alone on this mission, or you may have another pilot flying with you to defeat the enemy. First you fly against one enemy jet. You are in complete control: fly faster or slower, turn left or right — but most importantly, FIRE. If you are shot down, and you act quickly, you can bail out. You and your parachute float gently downward, hoping an enemy plane does not shoot you. If you survive, you will quickly return to the fierce dogfight. The enemy can also bail out!! You must shoot him down before he has a chance to return.

THE ENEMY RETURNS

Each time you defeat all enemy jets or helicopters, you advance to the next level where you fly against faster and/or more enemy planes. There are sixteen levels of difficulty to fight through. Bill Basham, the talented author of this high resolution program, has made it through only 8 levels before his planes were destroyed.

MANY WAYS TO PLAY

DOGFIGHT may be played in several different ways. You, alone, may challenge the computer, or, two players may fly against the computer — either on the same team or on different teams. With DOGFIGHT you can create your own custom game with as many as eight players crowding around your Apple keyboard controlling their own planes. You may select jets or helicopters on any level — be a daredevil with 7 computer jets against you. You are in charge with the custom mode.

FOR THE ACES

Micro Lab will award a special achievement plaque to the first 10 pilots who

reach 10,000 points in any of the auto modes. A special, individual, secretly coded message will appear when reaching that score. Report that code to Micro Lab to claim the Ace title.
Price $29.95

TITLE: DUNGEON CAMPAIGN, ADVENTURE
PUBLISHED BY: SYNERGISTIC
MEMORY: 16K RAM

Dungeon Campaign is a game of high adventure where the player directs an expeditionary force as it ventures into an underground labyrinth. The catacombs are filled with treasures and hazards, poisonous vapors and evil necormancers, stairways and pitfalls, sorcerous devices and an incredible assortment of monstrous inhabitants.
The dungeon's monsters may pursue or wait in ambush. They have a variety of powers, strengths, and modes of attack and they become increasingly dangerous in battle as lower levels are reached.
As the secrets of the dungeon are uncovered by your force, a color coded map is generated until you find your way safely out with your treasures.

PRICE: DISK, $15.00

TITLE: EARTHQUEST
PUBLISHED BY: PROGRAMMA INTERNATIONAL
Travel through the galaxy searching for the lost planet Earth. Survey alien star systems and land on strange planets teeming with weird life forms. Discover exotic cities whose civilizations range from primitive to highly advanced.
Visit a space colony or a zoo full of bizarre creatures. Wager on the outcome of a tago race or explore the depths of a huge, derelict space ship. But watch out for space pirates, supernovas, black holes, earthquakes, avalanches, volcanic eruptions, sandstrorms, blizzards, and savage beasts. In text mode.
INTEGER. 32K.
PRICE: DISK $19.95

TITLE: ENCHANTED ISLAND
PUBLISHED BY: MAD HATTER SOFTWARE
Somewhere, out in the middle of the Pacific Ocean, there is an ENCHANTED ISLAND, where magic is the order of the day. You have chanced upon this island and have set about exploring it. You discover fabulous treasures as you search the island. But, you find that you must use all your strength and cunning to survive. At every turn, you are confronted with danger!
PRICE: $12.95

TITLE: GALACTIC BLOCKADE RUNNER
PUBLISHED BY: MAD HATTER SOFTWARE

You are the captain of a federation starship battle cruiser. Your mission is to run an enemy blockade and to deliver vital supplies to federation forces under seige on planet M/5. You control your ship's course and speed along with the firing of its weapons. You wil have to fight battle after battle successfully to reach your destination. Besides the enemy, you will have to cope with ship malfunctions and ion storms.

This is a sophisticated game providing ship status reports, sensor scans and graphic displays of the enemy ship, weapons tracks and shield hits. It also displays appropriate warnings and messages. You'll find this game faster and more challenging than many of the Star Treks on the market.

PRICE: $9.95

TITLE: GALACTIC EMPIRE
PUBLISHED BY: BRODERBUND SOFTWARE

Even in the distant future men are faced with the one seemingly immutable law of the universe: man cannot travel faster than light. Thus the genius of military leadership remains unchanged from pre-atomic times: it is not a matter of shooting straight nor of being able to maneuver a spaceship through the increasing complexities of microcomputer space. The test of true military genius, as always, lies in the facility for total planning. Military success is a matter of logistical coordination, of delivering ships and men to the right place at the proper time.

GALACTIC EMPIRE challenges you to unite the Central Galactic System under a single flag, starting from an inferior position, by acquiring a military and manufacturing base from the planets you control. You are assisted by your officers, each with specific responsibilities for such tasks as scouting potential targets, levying taxes, recruiting new troops, and construction of new vessels for your navy. Your onboard computer keekps track of your scouts and construction orders, and stores star maps and a planetary directory to give you the tools you need to develop a comprehensive plan.

A special save routine allows you to store a game in progress if you wish. Single player game.

PRICE: $19.95 - APPLE Cassette, 48 K with APPLESOFT
$24.95 - APPLE Disk: 48K with APPLESOFT

TITLE: GALACTIC QUEST
PUBLISHED BY: CRYSTAL COMPUTER MANUFACTURING & SOFTWARE

Crystalsonics-hires graphics-the ultimate space adventure. Vegan warships attack and fire in real time simulation. Land on and trade with over 64 star systems in 3 galaxies. Allow 6-12 hours for play.

48K.

PRICE: $24.95

TITLE: GALACTIC REVOLUTION
PUBLISHED BY: BRODERBUND SOFTWARE

"Those who make peaceful revolution impossible will make violent revolution inevitable." — prominent Earth leader from early Atomic age.

In this realistic simulation players may choose to ignite or suppress the impending revolution by implementing social changes on worlds they control in order to sway the allegiances of various power groups throughout the galaxy and thereby acquire the resources and production capabilities to build a military force. Good administration will win as many worlds as military success.

Exciting sound effects and clever graphics give this 1 to 3 player game quick pacing, with many complex strategies which guarantee hours of pleasure. Ad-

vanced complexity but not difficult to play. Playing time 1 to 3 hours. Comes with 32 page book of rules, strategies, work sheets, manipulated historical facts, and revolutionary theory.
PRICE: $19.95 - APPLE Cassette: 32K with APPLESOFT
$24.95 - APPLE Disk; 48K with APPLESOFT

TITLE: GALACTIC TRADER
PUBLISHED BY: BRODERBUND SOFTWARE

If the military life is not your style, if cutting deals appeals and barter is your bag, then your game is trade. And there's no trade like galactic trade! As in Galactic Empire, your screen's sophisticated graphic display will help you keep tabs on all the action. Your viewport fills with stars and nearby planets as your CRT (a computer within the computer!) displays starmaps and trade records, performs fuel calculations, and provides general cerebral support. Real time action keeps the pressure on as you zip through space!
The object is to make a fortune by trading commodities throughout the galaxy, seeking out their places of origin to buy them cheaply, then bartering them on distant planets at exorbitant rates for local goods. You must have a level head to outbarter some of the sharpest businesscreatures in the galaxy.
For 1 player. 10 levels of difficulty allow playing time from 20 minutes to 5 hours.
PRICE:$19.95 - APPLE Cassette: 48K with APPLESOFT
$24.95 - APPLE Disk: 48K with APPLESOFT

TITLE: GALAXY WARS
PUBLISHED BY: BRODERBUND SOFTWARE

Another fine import from the same producer. You'll respect the attention to detail and the excellent use of the Apple's capabilities in both these fast action, hi-res games.
Apple II, with APPLELSOFT or INTEGER, 32K
PRICE: $24.95 Cassette

TITLE: GALACTIC WARS
PUBLISHED BY: APPLE COMPUTER INC.

Man your battle stations! Galactic Wars is a captivating game of strategy and skill that demands your boldness and cunning. As a commander and warrior, you'll position baseships, build your fleet of fighter craft, and try to outmaneuver and outshoot your opponent in battle. With bravery and persistence—and if The Force is with you —you may ultimately capture the enemy's capital star system, establishing your supremacy in the galaxy.
Galactic Wars allows you to start playing with small, medium or large fighting forces ... so you control the approximate length of the game; offers a pre-game training mode ... so you can improve your fighting skills before entering the game's battle phase; lets you save games in progress ... so you can resume play at your convenience.
Galactic Wars requires two players, teenage or older. It pits two longstanding, outer space foes—the Centrons and Krillians—against each other in tactical combat. The object of the game is to capture your opponent's capital star system.
Each player defends his own capital, while trying to capture his opponent's. When taking the offensive, you try to advance your baseships and fighters toward the "enemy's" capital system, occupying sectors of the galaxy as you proceed. This is the strategy phase of the game, played on a multi-colored mapboard of the galaxy. It is most fun when played using a color television or monitor.
The battle phase begins when a sector is occupied by opposing forces. Two rival fighter craft at a time are matched in laser combat (on a 3-D-like, star-studded,

high-resolution screen). Success depends on your shooting skill and the size of the fighter craft fleet you already have garrisoned in the sector. As you swallow up more and more sectors and zero in on the enemy capital, control of the galaxy becomes yours!
Galactic Wars is written in assembly language. To use it you'll need: an Apple II or Apple II Plus with minimum 32K bytes RAM; an Apple Disk II with controler (16-sector PROMs); Auto-Start ROM; a video monitor or television (color recommended).
With the Galactic Wars package, you'll receive: 1) Galactic Wars program diskette; 2) instructions.
PRICE: $35.00

TITLE: GLOBAL WAR
PUBLISHED BY: MUSE
MEMORY: 48K
HARDWARE: APPLESOFT ROM OR APPLE II PLUS
This popular cassette game is now available on diskette! Global War is a challenging computer assisted game for two to nine players. The computer does not function as a player, but acts as a scorekeeper, arbitrator and as a source of information for the players. Global War features a detailed high resolution drawing of the earth's continents divided into 42 regions. The game begins with the vomputer assigning each player a portion of the regions and starting armies. The players can allocate armies to specific regions or attack another player's territory. The object of the game is to invade and occupy all 42 territories. This is done by challenging opponents in a computer simulated battle, and occupying their territories. The game ends when one player holds all 42 territories. You can save the current game on disk at any time and restart it later at the same point.
PRICE: DISK, 24.95

TITLE: HAUNTED HOUSE
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE
It is 6:00 and you have until midnight to find the secret passageway out of a haunted house. During your search, you may find skeleton keys to open locked doors, good luck charms, friendly ghosts, evil spirits, and skeletons. The sound effects (creaking doors and stairs) add to the eeriness. The house layout changes in every game.

TITLE: HELLFIRE WARRIOR
PUBLISHED BY: AUTOMATED SIMULATIONS, INC.
Really not for everybody: newcomers to Dunjonquest should begin with something easier. Here the monsters are deadlier, the labyrinths more difficult, the levels far more challenging ...
But for the experienced Dunjonquest game player there are more command options, more portions (13!), more magical items (including — at last — magical armor), more special effects, more surprises. And an innkeeper, an armorer, apothecary and magic shops.
In part a sequel to The Temple of Apshai, up until now the greatest of all the Dunjonquest games. Hellfire Warrior can also be played completely on its own. Now the character you've created, representing the highest level of roleplaying to date, can explore the four new lower levels:
LEVEL 5 — "The Lower Reaches of Apshai." With the giant insects and other nasties that swarmed through the upper levels of Apshai. With rooms your hero can get into, but not out of.

LEVEL 6 — "The Labyrinth." The only exit is hidden within the Labyrinth. And man-eating monsters can thwart your hero.
LEVEL 7 — "The Vault of the Dead." ... And of the undead — skeletons, ghouls, mummies, specters ... invisible ghosts — lurking in the rooms, doors, secret passages, ready to reduce your hero to a pale shadow of himself. Permanently.
LEVEL 8 — "The plains of Hell." In an Underworld of lost souls and shades dead, of dragons and fiery hounds, of bottomless pits and blasts of hellfire, our hero must rescue the beautiful warrior maiden lying in enchanted sleep within a wall of fire. And bring her past unvelievable dangers and monsters ... even Death itself ... to sun and air and life itself.
The most exciting game yet from Automated Simulations, the leading producer of computer fantasy games.
Guaranteed: If it's not the most exciting computer game you've played, return it within ten days for a complete refund.
Available on disk for the Apple II and Radio Shack's TRS80, or on cassette for the TRS80 and for the Commodore PET.
PRICE: $24.95, cassette $29.95, disk

TITLE: HI-RES ADVENTURE #1 (MYSTERY HOUSE)
PUBLISHED BY: ON-LINE SYSTEMS

The first in a series of graphic 'ADVENTURE' style games. Over one hundred separately drawn HI-RES backgrounds. 48K.
PRICE: $24.95

TITLE: HOUSE OF SEVEN GABLES
PUBLISHED BY: MAD HATTER SOFTWARE

Wandering through the streets of old Salem, you suddenly come upon the HOUSE OF SEVEN GABLES. The sky grows dark, a cold wind begins to blow and rain starts to fall. You decide to take shelter inside. Within the house, ADVENTURE awaits you. Treasures are waiting to be found as you explore the dark, musty rooms. But ... beware the evil that lurks within. You might have difficulty leaving alive ... or leaving at all!
PRICE: $12.95

TITLE: HOUSE OF USHER
PUBLISHED BY: CRYSTAL COMPUTER MANUFACTURING & SOFTWARE

Wander through a haunted house. Rooms and scenery in 15 color lo-res graphics. We offer a $100.00 prize to the first person to solve the mystery. Over 200 monsters, objects, and perils.
48K.
PRICE: $24.95

TITLE: HYPERSPACE WARS
PUBLISHED BY: CONTINENTAL SOFTWARE

48-K TREK
The Terraunion is being attached by a deadly Klepton invasion force. As commander of the United Starship Excalibur, it is your mission to destroy this invasion force. Hi-Res Graphics!
3-D SPACE BATTLE
A high resolution three dimensional space game where the player searches for an alien ship using the on-board scanners.
PRICE: $29.95

TITLE: INVASION ORION
PUBLISHED BY: AUTOMATED SIMULATIONS

Now Automated Simulations challenges you to pit your skills against the computer! "Invasion Orion" — a complete tactical science fiction wargame from Automated Simulations — uses the same game system as "Starfleet Orion," but you can play solitaire! With "Invasion Orion" your computer is always ready for a fight.

Most board games are designed for two or more players. That's fine if you can find someone who wants to play the same game at the same time. And you're probably familiar with the difficulties in playing solitaire, a game designed for two or more. But with "Invasion Orion" you always have a challenging opponent, willing to play on either side of any scenario, at any time.

"Invasion Orion" provides you with scenarios designed to allow players of different skill levels to find a challenging game of space warfare every time. Choose from three levels of play for the computer. And you can have the computer play either side.

"Invasion Orion" is ready to play as soon as you get it. Just load the program cassette, choose the scenario and skill level you want and enter your orders. In a matter of moments the computer makes its move and automatically resolves combat.

The computer takes care of the details, making the game easy to play. It prompts you for your entries. And the simultaneous cambat is resolved quickly so that you can get on with deciding what to have your starfleet do. No knowledge of programming is required, either. You just play the game.

10 Scenarios with fictional backgrounds. 30 Ship types. 3 Different weapons systems. Tractor-Pressor Beams. 3 Selectable levels of difficulty. Solitaire play against your computer.

Minimum Configuration Requirements:
APPLE Cassette: 32K with APPLESOFT in ROM
APPLE Disk: 48K with APPLESOFT in ROM
Rating: Advanced complexity ... medium ease-of-play ... ¼ to 4 hrs. playing time.
PRICE: $19.95 Cassette $24.95 Disk

TITLE: JOURNEY
PUBLISHED BY: SOFTAPE

You are about to embark on a very hazadous but profitable Journey. The Apple is your eyes, ears, arms and legs. You can get an object that is laying on the ground and you can travel North, East, South, West, Up and Down. You need to acquire tools as you Journey forth and score precious points to become a Grandmaster Journeyer. Requires 48K on any Apple.
PRICE: $19.95 Cassette

TITLE: JOURNEY TO ATLANTIS
PUBLISHED BY: MAD HATTER SOFTWARE

Deep beneath the sea there lies the ruins of an ancient civilization; the once proud and mighty kingdom of ATLANTIS. you have searched for years for this place and have finally found it. You are now ready to explore this legendary city in search of ADVENTURE, fabled treasures, and knowledge. You must be ready to use all of your skills and courage to survive.
PRICE: $12.95

TITLE: JOURNEY TO THE CENTER OF THE EARTH
PUBLISHED BY: MAD HATTER SOFTWARE

Deep within the earth there exists another world that never sees the light of day. You journey into this strange subterranean place in a special machine built to bore through solid earth, but, it has broken down. You set off in search of a

means to get back to the surface. As you explore the giant caverns and winding passages, you find treasures, mystery, and ADVENTURE! On the way, you meet with strange and frightening creatures and you must use all of your resources and skill to stay alive.
PRICE: $12.95

TITLE: KING TUT'S TOMB
PUBLISHED BY: MAD HATTER SOFTWARE

Night has fallen over the ancient land of Egypt. A hot, dry wind blows in from across the parched desert. The entrance to KING TUT'S TOMB is just before you. Many have come here before. Many have fallen victum to the curse that guards it. Undaunted, you have come to explore it in search of treasure and ADVENTURE!
PRICE: $12.95

TITLE: L.A. LAND MONOPOLY
PUBLISHED BY: CONTINENTAL SOFTWARE

The object of L.A. Land Monopoly is to become the richest player in the game in terms of total assets — cash, property, and buildings — and to drive all your opponents into bankruptcy. Hi-Res Graphics!
PRICE: $29.95

TITLE: LASAR WARS
PUBLISHED BY: CRYSTAL COMPUTER MANUFACTURING & SOFTWARE

Crystalsonics-hires graphics - protect the planet earth from a full scale alien invasion. Over three types of invading craft and hundreds of approach simulations. The game speaks for itself.
48K.
PRICE: $29.95

TITLE: MASTERMIND
PUBLISHED BY: ALLADIN

This challenging game of intrigue in the Aladdin Old Favorites™ series gives you the chance to exercise your power of deduction, logic and reason.
And exercise them you will, to the very limits, as you try to solve the computer's numbers puzzle using the clues as they are provided one-by-one.
If finding a three-digit number is not challenging enough, for example, then ask the computer for a four-digit, or even a five-digit number.
You control the degree of difficulty in this stimulating game that will test your mental powers to the utmost. Beat the computer. . .then you become the Mastermind.
PRICE: TAPE, 11.95

TITLE: MIDWAY CAMPAIGN
PUBLISHED BY: THE AVALON HILL GAME COMPANY

MIDWAY CAMPAIGN is a computer simulation of the battle for Midway Island. Your microcomputer controls a huge force of Japanese ships whose objective is to invade and capture Midway Island. If the Japanese can win air superiority over Midway, the success of the invasion is virtually guaranteed. If not, they will be forced to turn back to prevent the loss of irreplaceable troops who would be totally vulnerable in their invasion craft. In the actual engagement, the Japanese made several tactical errors which cost them the battle. Your computer probably won't make the same mistakes! You command the badly outnumbered and outranged U.S. Navy forces. Your only advantage is surprise.
PRICE $15 Retail

TITLE: MORLOC'S TOWER
PUBLISHED BY: AUTOMATED SIMULATIONS

"Morloc's Tower" is the third title in the DunjonQuest series. In it you'll find 3 kinds of rings, a magic sword, two amulets, half a dozen other treasures, 30 rooms, 18 real-time command options, and a dozen types of monsters including crafty old Morloc himself. Morloc is an intelligent opponent for you to vanquish. Morloc's Tower is a fascinating game that's easy to learn but a real challenge to master. Even after you've figured out all of the puzzles (or think you have), you'll play again and again to improve your score.
Be warned: the optimal solution will prove to be even more elusive than the mad wizard!
Here are hours of fantasy adventure for you and your microcomputer.
"Morloc's Tower" includes everything you need to begin your quest:
Game program. 1200-Byte data file. Colorful 16-page manual.
Rating: Intermediate complexity ... easy to play ... ¼ to 1 hr. playing time.
PRICE: $14.95 Cassette $19.95 Disk

TITLE: MYCHESS
PUBLISHED BY: DATASOFT

At last the original CP/M version of MYCHESS, the world champion micro-computer chess game, is available in several CP/M formats for your home computer. With the Z-80 Softcard and your Apple you can play against the winner of the Fifth West Coast Computer Faire. This is the program that all the experts have been raving about. You can own the most advanced micro-computer chess game available on the market today. MYCHESS is ready to challenge you, so why not take on the best!
PRICE: $34.95

TITLE: MYSTERY HOUSE, A HI-RES ADVENTURE
PUBLISHED BY: ON-LINE SYSTEMS

See your adventure as you play, by use of over 100 Hi-Res pictures. Communicate in plain English, using a vocabulary of over 300 words. Each room of MYSTERY HOUSE is shown in Hi-Res graphics (created by VERSAWRITER), detailing the surroundings and individual objects. Discover the secrets in each room and the use of its contents.
The game begins in the front yard of a large, spooky, old Victorian mansion. When you enter the house you find yourself involved in mysterious murders and intrigue, and you must stay until the mystery is solved. Your friends are being murdered one by one. You must find out why, and by whom. But be careful, or you could be the next victim.
As you explore the house, you uncover puzzles to be solved and hazards to be overcome. A secret passageway may lead you to the answer - or to your doom!
ASSEMBLY. 48K.
PRICE: DISK $24.95

TITLE: NORTH ATLANTIC CONVOY RAIDER
PUBLISHED BY: THE AVALON HILL GAME COMPANY

This game is a computer simulation of the Bismarck convoy raid of 1941. The computer controls the British convoys and British battleships. Will the Bismarck sink the Hood, only to be sunk in turn by the Rodney and King George V, as in history? Or, will the Bismarck cripple or sink the British Home Fleet and go rampaging through the convoy lanes? Your decisions will determine the fate of the Bismarck.
PRICE: $15 Retail

TITLE: NUCLEAR REACTION
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

Nuclear Reaction is an exciting strategy game for two players. Each player, in turn, places a particle of radioactive material on a 6x6 board. When the number of particles at a location reaches its critical mass, it explodes, sending a particle to adjacent squares. As the board fills up, a single explosion can cause long chain reactions. The object of the game is to cause the right chain reaction to wipe out all your opponent's pieces. Nuclear Reaction is a game of skill, fast decisions, and quick reversals, making it fun to play for many hours. Action sound effects.

TITLE: NUKEWARE
PUBLISHED BY: THE AVALON HILL GAME COMPANY

NUKEWAR is a computer simulation of a nuclear confrontation between two hypothetical countries. You must choose the methods to defend your country: either by massive espionage efforts, or by building jet fighter-bombers, missiles, submarines, and anti-ballistic missiles. Meanwhile, your cold and calculating computer will choose its own stragety to defind its country while also trying to destroy you utterly! NUKEWAR is very fast-paced and easy to learn, and can be enjoyed equally by game players of all ages and levels of experience. Best of all, once the nuclear war is over, you can bring the two countries back to life and try it again!
PRICE: $15 Retail

TITLE: ODYSSEY: THE COMPLETE APVENTURE
PUBLISHED BY: SYNERGISTIC SOFTWARE

The Sargalo Sea is a haunted realm of sea serpents, dragons and fabulous beasts. The mysterious islands which break its surface each have uniquely deadly perils. Yet, it is a land which can provide great wealth and power to the warrior strong enough to win it. In your crusade to defeat the dreaded Caliph of Lapour and win the golden sceptor of power, you will cross the great sea, explore the jungles, swamps, and mountains of the islands. As you quest for the weapons and magical devices you will need to enter his fortress, you will search ancient tombs and temples and the dreaded Caverns of Mordril.
Your journey will be on foot or horseback across the high resolution map of an island until you win enough treasure and gather the crew required to buy and man a ship. You can then continue your odyssey throughout the realm. When you have sufficient strength, your attack of the fortress on Lapour can begin.
At every stage of the apventure, *you* will decide the action to be taken - attack the merchants or trade with them; kill monsters or try to recruit them. Such decisions establish the character of your party as the quest unfolds. Your revealed capacity for good or evil will determine the alliances or conflicts formed with the beings you encounter.
The incredibly detailed graphics and animation effects of Robert Clardy's Odyssey put it in a category by itself in the annuals of mythic adventure games. Five separate detailed maps and three programs interlink to bring you an unendingly varied apventure uniquely different each time you play.
Requires 48K Apple II computer with disk. Only available in Integer Basic.
PRICE: $30.00

TITLE: OIL TYCOON
PUBLISHED BY: INSTANT SOFTWARE

Could you be the world's wealthiest oil magnate? Find out with this action packed simulation of real world, cut-throat competition.
Beginning with two million dollars, and armed with the geologist's reports, you'll

explore for new wells, exploit existing wells and invest heavily in research and development.
Once you have oil to sell, you can name your own price. Don't get too greedy, or the demand for your oil may dwindle until prices become more attractive.
When the game is over, you may find yourself the wealthiest tycoon around — or you may be the bankrupt victim of too many oil spills, blowouts and dry wells. No matter how you fare, you're sure to find Oil Tycoon both challenging and exciting on your Apple II.
PRICE: $9.95

TITLE: OLDORF'S REVENGE
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

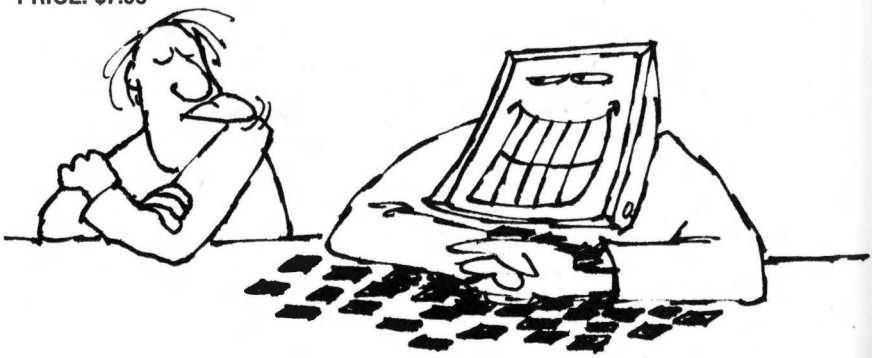
OLDORF is a well done and exciting HI-Res game using over 100 HI-Res pictures. OLDORF requires 48K, Applesoft Rom, and Disk. As you explore the caverns and castles (each locale is done in HI-Res) looking for treasure, you must battle the one-eyed, two-thumbed torkie; find the grezzerlips' sword; visit the snotgurgle's palace and get through the domain of the three-nosed ickyup — Plus MORE!
48K.
PRICE: $19.95

TITLE: OLYMPIC DECATHLON
PUBLISHED BY: MICROSOFT

There's never been a program that tests your reflexes and coordination like Olympic Decathlon. Just like the real one, Microsoft's has 10 events, including shot put, pole vault, long jump, javelin throw, and six more. Winning takes a combination of strategy, timing, coordination, and physical endurance (really!). When you jump or throw, the program claculates the actual trajectory, and shows you what's happening with exciting animated graphics. After each event, the scores of all competitors (up to 8) are displayed. It's the ultimate party game to show off your computer!
Disk-based Decathlon runs on a 32K TRS-80. The cassette version requires a 16K Level I or Level II system.
Versions for the Apple II available soon.

TITLE: OTHELLO III
PUBLISHED BY: MAD HATTER SOFTWARE

A strategy game played on an eight by eight board. The object of the game is to capture as many of the squares as possible. You can play against a friend, the computer, or even have the computer play against itself. The game has an interesting graphics display.
PRICE: $7.95



TITLE: PEG JUMP
PUBLISHED BY: PROGRAMMA INTERNATIONAL

Greetings to all you puzzle lovers!!! How 'bout an I.Q. test? How 'bout a game of PEG JUMP? This is a beautiful recreation of the popular board game present at many restaurant tables. The object is to remove as many PEGS from the board as possible by jumping in a 'checker like' manner. Each time a PEG is jumped, it is removed. If you prefer, the computer will solve the puzzle for you, checking up to almost 100,000,000 moves for the optimum solution. Hi-Res graphics and sound.
ASSEMBLY. 16K.

PRICE: TAPE $9.95.

TITLE: PERCEPTION PACKAGE
PUBLISHED BY: EDU-WARE

Includes three PERCEPTION exercises on an attractively priced diskette.
PERCEPTION I - Match you visual skill against the Apple by drawing lines with the same lengths as the computer's. You do this in real time using the paddles to construct Hi-Res lines in a deliberately deceptive room. Different placements will both humor the beginner and challenge the expert, as the computer scores your progress.
PERCEPTION II - How good are your powers of observation? Using a test developed for World war II spy candidates, this program measures your ability to remember complex visual shapes. The challenge comes in differentiating a shape seen only through a narrow mask from others much like it. User inputs choose from 48 difficulty levels, with the results tabulated into a weighted score.
PERCEPTION III - Use your visual memory to match the SIZES of identical shapes. You control the difficulty of the task by choosing the shape, variety, display time and presentation format. A weighted scoreboard reveals your true level of expertise. APPLESOFT ROM. 48K.

PRICE: DISK $19.95

TITLE: PLANET MINERS
PUBLISHED BY: THE AVALON HILL GAME COMPANY

PLANET MINERS gives one to four players the chance to compete with each other and the computer to stake valuable mining claims through the solar system in the year 2050. Each player must decide which ships to send to which planets and when to try "dirty tricks" like sabotage and claim-jumping. If there are less than four players, the computer takes the other parts. (It can even play all by itself!) Thus, PLANET MINERS can either be played solitaire or with friends.

PRICE: $15 Retail

TITLE: THE PRISONER
PUBLISHED BY: EDU-WARE

Inspired by the highly acclaimed television series, your Apple puts you in a nightmare 1984 world whose rulers seek to break you down by an extensive array of brainwashing techniques, while you are armed only with your intelligence and sense of individuality. Can you escape to freedom or will you remain forever THE PRISONER?

PRICE: $29.95

TITLE: SANTA PARAVIA AND FIUMACCIO
PUBLISHED BY: INSTANT SOFTWARE

It is the dawn of the 15th Century; you rule a tiny Italian city-state. Your goal: The Crown!
Up to six players can compete as rulers and neighboring cities. You control the grain harvest, feed your serfs, set tax rates, dispense justice, and invest in public works.
The future of your realm will depend on your decisions. If they are wise, your city-state will grow and you will acquire loftier titles. If your rule is incompetent, your people will starve and you may be invaded by your neighbors.
How will *you* rule your kindgom? Will you be an enlightened leader — or an unscrupulous despot) Only you can answer that question — with Santa Paravia and Fiumaccio.
Super graphics version now available for the Apple II.
PRICE: $9.95

TITLE: SAUCER INVASION
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

We're being invaded by aliens from another planet. Your mission is to destroy as many saucers as possible with 15 missiles. Use the game paddle to move the launch tube back and forth across the bottom of the screen, then fire with the paddle button. A two stage missile boosts slowly, firing its warhead midway toward the traget. The flying saucers fly at different speeds and altitudes so luck and timing are crucial! High resolution graphics, exploding saucers and wild sound effects make full use of the APPLE capabilities.

TITLE: SARGON II
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

SARGON II (Dan & Kathe Spracklen) "Buy this program, when it becomes available ... and evaluation routine that enabled it to beat the giants! ... Unequaled in the endgame ..." Personal Computing, July 1979. With new algorithms added, the program is able to push passed pawns toward queening; play a stronger end game; and range into deeper play levels at end game without user direction. SARGON II has 7 levels of play, and levels 1-3 play in tournament time. It has randomized opening book up to 6 levels of play for 3 moves. Also, you can now request SARGON II to tell what the best next move is for you. #03403, TRS-80 Level II; #03404, Apple II
PRICE: $29.95

TITLE: SORCERER'S CASTLE
PUBLISHED BY: MAD HATTER SOFTWARE

The Dark Castle has stood here for countless ages. Sinister and forboding, it is occupied and protected by The Evil Sorcerer. You must find the castle, explore it, collect its treasures and escape with your life. You must constantly be on guard against the castle's dangerous occupants, including the Sorcerer!
PRICE: $12.95

TITLE: SPACE
PUBLISHED BY: EDU-WARE

A unique epic game series which provides a multi-faceted simulation of human life in an interstellar environment. Two different game packages represent some of the decisions which might be faced by a member of an interstellar society. Play begins with the nbuilding of one or more "characters"

who may enter the various scenario games on each of the diskettes. You are challenged not only to cope with the scenario itself, but also to learn the strengths and weaknesses of your characters.
SPACE includes Characters and the original scenario games: First Blood, Defend, Explore, Trader and High Finance.
PRICE: DISK, 29.95

TITLE: STAR CRUISER
PUBLISHED BY: SIRIUS SOFTWARE

The ULTIMATE ACTION game! A real time hi-res action game with sound, action and suspense. Finally a game that requires fast reflexes, coordination and strategy. These critters actually chase you. A game for all ages. This game runs under 13 or 16 sector format with 32K RAM.
PRICE: $24.95

TITLE: STARFLEET ORION
AUTOMATED SIMULATIONS

War in The Cosmos. "Starfleet Orion" brings you the opportunity to fight space battles in your living room. The Deathsong scenario is one of twelve provided in the game. These are of varying complexity with 2 to 15 spacecraft.
12 Games in 1 — infinitely expandable.
One program is the game. The other programs create data files — scenarios — that make "Starfleet Orion" infinitely expandable. You get 12 play-tested scenarios in the Battle Manual. You can invent more of your own. Your only limit is your imagination!
"Starfleet Orion" is designed for 2 players. Includes Rulebook and Ship Control Sheets as well as the Battle Manual.
Minimum Configuration Requirements:
APPLE Cassette: 16K or 32K with integer BASIC in ROM (2 program versions supplied)
APPLE Disk: 32 K with integer BASIC in ROM
Rating: Advanced complexity ... medium ease-of-play ... ½ to 6 hrs. playing time.
PRICE: $19.95 Cassette $24.95 Disk

TITLE: STIMULATING SIMULATIONS
PUBLISHED BY: POWERSOFT

Fly through the heavens, search for buried treasure, catch a diamond thief, evade a hungry monster, run a thriving factory, and more. You'll love the fun and at the same time learn how the BASIC language really works.
Stimulating Simultions is a series of ten fascinating and educational games written by Dr. C. William Engel, Professor of Mathematics Education at the University of South Florida.
The games begin on an elementary level, moving up to more complex situations, and can be played by most school children. Each game presents a fanciful situation that challenges the player.
The Stimulating Simulation programs are accompanied by a 64-page booklet with instructions, all program listings, flowcharts, and suggested modifications. The programs are short and simple to understand. After you have challenged a Stimulating Simulation, the program listing will make sense. You can see the effect of the program commands on the events of the game.
And you can modify or rewrite the programs easily, and see what happens with your changes. With some practice, you'll be creating your own Stimulating Simulations.

The ten simulations include Art, Auction, Monster Chase, Lost Treasure, Nautical Navigation, Rare Birds, Gone Fishing, Space Flight, Forest Fire, Business Management, and Diamond Thief.
PRICE: TAPE, 14.95

TITLE: SUMER
PUBLISHED BY: CRYSTAL COMPUTER MANUFACTURING & SOFTWARE
Travel back through time to ancient Sumeria in the middle east. You are given 10 years as king to restore this kingdom to prosperity. Plant, war, consult the astrologers - very hard to beat!
48K.
PRICE: $19.95

TITLE: SUPER DUNGEON
PUBLISHED BY: PROGRAMMA
MEMORY: 48K, INTEGER BASIC
This is a SUPER version of the popular Dungeons and Dragons game. Enter the maze and try to find treasures, magical items, etc., while combatting thieves, monsters, and more!
PRICE: DISK, 24.95

TITLE: SUPER STARWARS
PUBLISHED BY: PROGRAMMA
MEMORY: 32K, INTEGER BASIC
This is an excellent Hi-res game in which starts you from hyper space and moves you into normal space where you try to destroy 32 3-D Tie-fighter.
PRICE: TAPE, 15.95

TITLE: TARTURIAN
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES
THE TARTURIAN requires 48K RAM, APPLESOFT ROM, and disk. As you explore the 160 rooms (each done in HI-RES) gathering weapons and treasure that will prepare you for the final battle against the TARTURIAN, you will encounter deadly KROLLS, battle the MINOTAUR, try and get by COUNT SNOOTT-WEEKER, decipher the YUMMY YAKKY'S secret, make friends with the TULIESWEEP, avoid GHOULS, explore the PILLAR tombs, discover secret passages and more, 5 interlocking programs.
PRICE: $24.95

TITLE: THE TEMPLE OF APSHAI, DUNJONQUEST
PUBLISHED BY: AUTOMATED SIMULATIONS

Adventure No. 1. Allows the player to build a fantasy warrior, created with a certain set of attributes and a certain amont of money. He bargains with the "Innkeeper" to purchase equipment (weapons and armor) for this adventure in the dungeon. He may, after he has won some treasures in the Temple, return to the inn and replenish his arrows and buy items he did not previously have enough money for. Once in the dungeon, the player moves through a set of rooms fighting monsters and looking for treasure. At any time, he can give any of 18 one-letter commands for moving, fighting, or other actions. He depends on his characters expertise, attributes, equipment, fatigue, and current health. Some of the treasures contain magical items that will aid the player. The warrior can return to the dungeon time after time until he has picked it clean,

been killed or he tires of that area. There are four different sections of the dungeon, each of different difficulty and each having 50 to 50 rooms and its own set of monsters and treasures.

PRICE: TAPE, 24.95
DISK, 29.95

TITLE: TERRORIST
PUBLISHED BY: EDU-WARE

A frightening two-play game which puts you directly into the hot seat, managing a life and death struggle with ruthless terrorists. The paradoxes and pressures inherent in both sides of the struggle are brought to life as the Apple allows each to move against the other simultaneously.

Included are three interaction scenarios (capture of a building and hostages, air piracy, and nuclear blackmail), a parameter generator, a scoring routine, and an easy-to-use turn-key system which brings all of these programs together. Random and player-generated parameters generate that no two confrontations will be exactly the same, making this package a sobering and thought provoking experience for all. (The hijacking scenario game requires ROM Applesoft).

PRICE: DISK, 29.95

TITLE: THREE MILE ISLAND
PUBLISHED BY: MUSE

The technology of a nuclear reactor too complex to handle? Now you have the opportunity to decide for yourself with THREE MILE ISLAND, a realistic simulation of a pressurized nuclear reactor. The comprehensive documentation details the operating mechanisms and component interactions. Supply electrical power to your customers at a profitable rate of return, or lose your license to operate. Four spectacular displays are provided to monitor the containment building, turbines, filters, condenser, reactor core and pump house. Valves, pumps, turbines, filters and control rods are individually activated by keyboard command.

PRICE: DISK, 39.95

TITLE: TORPEDO ALLEY
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

The object of Torpedo Alley is to sink as many ships as possible with your forward topedo tubes. Move into position and FIRE!! But don't waste a shot — it takes time to reload when the tubes are empty. Targets include aircraft carriers, patrol boats, destroyers, and cargo ships. Depending on your score, you earn the rank of cook, seaman, or captain. How many stripes for you?

TITLE: TIME TRAVELER
PUBLISHED BY: KRELL SOFTWARE

The best of the adventure games. Confronts player with complex decision situations and at times, the demand for real time action. Using the time machine, players must face a challenging series of environments that include: the Athens of Pericles, Imperial Rome, Nebuchadnezzar's Babylon, Ikhnaton's Egypt,

Jerusalem at the time of the crucifixion, the Crusades, Machiavelli's Italy, the French Revolution, the American Revolution and the English Civil War. Deal with Hitler's Third Reich, the Vikings, etc. Involve yourself with historical military and government operations, markets, etc. in fascinating game situations. Each game is unique!
PRICE: $24.95

TITLE: TREK
PUBLISHED BY: MAD HATTER SOFTWARE

One of the more advanced Star Trek games on the market. This version features advanced graphics and includes sound effects. As in most Star Trek games. You are in command of the Enterprise. Your mission is to search out and destroy the enemy Klignons as well as the five secret Klignon bases (these will not show up on your long range sensor scans - you have to search for them). This version uses graphics in it's short range sensor scans and displays battles using exciting graphic displays of the ships firing at each other and exploding when destroyed, all of this accompanied with sound effects. You'll agree that this is one of the best Star Treks to date.
PRICE: $14.95

TITLE: TUESDAY NIGHT FOOTBALL
PUBLISHED BY: SHOESTRING SOFTWARE

Tuesday Night Football for the Apple II simulates NFL action between the player's Houston Oilers and the computer controlled Pittsburgh Steelers. The game includes 17 plays from offense and 6 defenses.

PRICE: CASSETTE $13.95
DISK $17.95

TITLE: UFO
PUBLISHED BY: CREATIVE COMPUTING SOFTWARE

You are the captain of a space ship carrying the last remnants of the human race, after a space war with another planet in which both worlds were destroyed. The ailens have launched a similiar vessel and will attempt to destroy your ship. On each move you decide whether to maneuver, halt for repairs, or fire from your arsenal of heavy guns, warheads and lasers.

TITLE: ULTRACHECKERS™
PUBLISHED BY: MALIBU MICORCOMPUTING

The most advancec checkers program ever available. Combines superb graphics/sound effects and exceptional ease of operation with advanced artificial intelligence techniques. Checkers are played according to international rules with nine levels of play. Program features "self-demonstration," "advice" and "problem" modes. "Self-demonstration" allows the APPLE to play itself at a speed you control. "Advice" permits you to ask the APPLE to recommend your next move. "Problem" allows special board set-ups for "what-if" questions. Excellent for learning or improving your game! Moves are easily made using cursor control. Complete playing rules and program instructions included. 32K, machine language for the Apple II or II Plus.

PRICE: $29.95

TITLE: WILDERNESS CAMPAIGN
PUBLISHED BY: SYNERGISTIC SOFTWARE
MEMORY: 48K RAM

Wilderness Campaign is a game of high adventure in which you undertake a crusade to free the kingdom of Draconia from the Evil Necromancer that is tyrannizing it. As you direct your party across the high resolution graphics map of Draconia, you must overcome obstacles, defeat hostile inhabitants, survive various natural hazards (avalanches, quicksand, etc.) and explore numerous tombs, temples, castles, and ruins in search of gold and magical devices.

When treasure is found, you will go to nearby villages to hire men and purchase weapons, armor, and assorted useful supplies. The supplies and any magical devices that you find will aid you in your ultimate quest: to find the ancient weapons of power required to defeat the Necromancer.

Once you have found the required magical weapon and have gathered and equipped a suitable army, you are ready to attack the fortress of the Necromancer itself. The future of Draconia rests on your shoulders.

TITLE: WINDFALL, THE OIL CRISIS GAME
PUBLISHED BY: EDU-WARE

Have high energy prices and short supplies left you with more time for your computer? WINDFALL will fill those empty hours (though not, unfortunately, your gas tank), and alleviate frustrations as your brain tangles with energy markets. As the Chief Executive of Engulf Oil you join the other side of the petro world, attempting to turn crisis into cash. Screen displays show both graphically and numerically the results of your manipulations, as a helpless public lines up at your stations.
APPLESOFT (ROM or RAM). 32K.

PRICE: TAPE $14.95
DISK $19.95

TITLE: THE WIZARD
PUBLISHED BY: HIGHLANDS COMPUTER SERVICES

The Wizard is a well done and exciting hi-res adventure type game using over 100 hi-res pictures. The Wizard requires 48K, APPLESOFT ROM and disk.
As you explore the caverns and castles (each locale is done in hi-res) looking for treasure you must battle the one-eyed, two-thumbed torkie; find the Grezzerlips' sword; visit the Snotgurgles's palace and get through the domain of the three-nosed Ickyup plus more! A real must for adventure enthusiasts.
PRICE: $19.95

TITLE: THE WONDERFUL WORLD OF EAMON
PUBLISHED BY: THE COMPUTER EMPORIUM

Eamon is a fantasy-role playing game for the Apple II. With new dungeons being designed constantly, Eamon is infinitely expandable. At present, the world of Eamon consists of —

EAMON MASTER DISKETTE - This is the diskette you must have to live in the world of Eamon. It controls the creation of new characters, buying spells and equipment for your characters, and includes the first adventure, The Beginner's Cave.
ADVENTURE #2: THE LAIR OF THE MINOTAUR - A friend of yours vanished while attempting to burglarize a local castle. You bungled your attempt at rescue, and found yourself in an underground cavern. Can you rescue your friend? Can you rescue yourself?
ADVENTURE #3: THE CAVE OF THE MIND - A mysterious stranger hands you a bubbling green potion. In a moment of foolishness, you drink it. The room spins and you find yourself — elsewhere. Can you find the way out?
ADVENTURE #4: THE ZYPHUR RIVERVENTURE - Your old friend, Professor Axom, has been kidnapped by the infamous Black Warrior. The Black Warrior is hiding somewhere near the Zyphur river. Your mission: defeat the Black Warrior and find the Professor.
ADVENTURE #5: THE CASTLE OF DOOM - The old castle had been deserted for centuries before the two old ladies had returned with the deed. Many vile creatures (with glorious treasure) have moved in. If you will empty the castle for the new owners, the treasure is yours!
ADVENTURE #6: THE DEATH STAR - A queer wrench in your stomach, and you find yourself in universe ruled by science, not magic. Your tiny ship has been dragged aboard a huge planet-destroying starship. You must free your ship and take-off to return to the normal world.
ADVENTURE #7: THE DEVIL'S TOMB - You are in the nether regions, where no hero can survive. But, the dark master's sadistic desire to see you struggle before you die may leave you a way out!
ADVENTURE #8: THE ABDUCTOR'S QUARTERS - A friend has been captured by the infamous Abductor, a retired free adventurer. Can you rescue him or will you need rescuing yourself?
SPECIAL: THE DUNGEON DESIGNER DISKETTE - Tired of fighting in the dungeons others have created? Want to see your friends struggle in pits of your own designing? This diskette makes creating your own adventures practical. With extras such as manuals for players and dungeon designers, you will want this diskette.
THE ILLUSTRATED PLAYER'S MANUAL - Although not necessary to participate in the wonderful world of Eamon, this invaluable collection of facts, descriptions, and suggestions is now available in printed form. Every serious Eamon player should have this book. Digest sized, sixteen pages. Write for price.
PRICE: $10.00 per diskette, with two adventures recorded on a diskette.

TITLE: WORLD OF ODYSSEY
PUBLISHED BY: POWERSOFT

A new adventure game utilizing the full power of Disk II, which enables the player to explore 353 rooms on 6 different levels of full dragons, dwarfs, orcs, goblins, gold and jewels.

PRICE: Tape, $14.95
Disk, $19.95

TITLE: WORLD WAR III
PUBLISHED BY: CRYSTAL COMPUTER MANUFACTURING & SOFTWARE

Crystalsoncis-hires graphics - for you war game freaks, this is it! Iran and Iraq -nuclear missles - hires 3 screen battlefield - demolition squads - tanks -strategy. Custom designed for two arm chair generals. Save the world from nuclear holocaust!
48K.
PRICE $29.95

STRATEGY GAMES SECTION 2

Apple Galaxian 2SG-1
Bill Budge's Space Album 2SG-1
Computer Air Combat 2SG-1
Encounter 2SG-1
Head on 2SG-2
Hi-Res Adventure #: Mission Asteroid 2SG-2
Lords of Karma 2SG-2
Reversal 2SG-3
Sargon II 2SG-3
The Star Gazer's Guide 2SG-3
Tawala's Last Redoubt 2SG-4
Zork 2SG-4
Robot War 2SG-4
Super Invasion (and other programs) 2SG-5
Space War 2SG-5



TITLE: APPLE GALAXIAN
PUBLISHED BY: BRODERBUND SOFTWARE

Apple Galaxian — in brilliantly colored array, the Galaxians swoop down from all sides in dazzlingly swift attacks to do battle upon the lone defender. This faithful rendition of that most popular of all bar games may drive you around the bend, but think of all the quarters you'll be saving! Apple II Integer or Plus, 48K disk.
PRICE: $24.95

TITLE: BILL BUDGE'S SPACE ALBUM
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.

A series of excellent games with an excellent reputation
- death star
- solar shootout
- tail gunner
- asteroid

PRICE: $39.95, diskette

TITLE: COMPUTER AIR COMBAT

With Computer Air Combat, your screen lights up with an open sky generated by Hi-Res graphics offering global and tactical plots. Squint your eyes a bit, let loose your mind, and you'd swear your keyboard has melted into the throttle, rudder, altimeter, and other cockpit instrumentation of a World War II combat plane. In fact, any of 36 famous fighters or bombers, from a Spitfire and B-17 Flying Fortress to the Focke-Wulf 190 and A6M5 Zero. Each plane is rated — in strict historical accuracy and detail — for firepower, speed, maneuverability, damage-tolerance, and climbing and diving ability.
Practically every factor involved in flying these magnificent airplanes has been taken into account, even down (or up?) to the blinding sun. Climb, dive, twist, and turn. Anything a real plane can do, you can do. However, the computer prevents all "illegal" moves — such as making an outside loop (which in real life, would disastrously stall a plane).
PLAY THE COMPUTER. Aside from being the game's perfect administrator and referee, the computer will serve as a fierce opponent in the solitaire scenarios provided: Dogfight, Bomber Formation, radar-controlled Nightfighter, and V-1 Intercept. There's even an Introductory Familiarization Flight (with Air Race option) to help you get off the ground.
With the number and type of planes and pilot ability variable, you can make the computer as challenging as you want to give you the ultimate flying experience.
PLAY A HUMAN. Two can play this game as well, in dogfights and bomber attacks. Given a handicap of more or better planes or an ace pilot (or all of the above), even a novice at Compuer Air Combat stands a chance to defeat a battle-hardened veteran.
Computer Air Combat gives you the game disc, a rule book, two mapboard charts (for plotting strategies between moves), and three player-aid charts.
PRICE: $59.95

TITLE: ENCOUNTER
PUBLISHED BY: CLONE SOFTWARE

It's more than just a game. It's an adult comedy. It's a parody, a satire — it's the penultimate experience!
A computer interview determines your romantic mood. Then the computer selects a "Lewd" — a personalized surprize suggestions for your enjoyment.

There's no "manual" to reveal the suggestions in advance — every Lewd is buried in the program, awaiting the proper moment.
But that's not all. You can even enter your own Lewds! Place your wildest desires in the computer! Surprise your mate.
Order today, and you'll also get a hearty program that interrogates your innermost appetites and then selects the perfect pizza to satisfy you — at no extra charge.

TITLE: HEAD ON
PUBLISHED BY: CALIFORNIA PACIFIC COMPUTER CO.
Warning: this game is highly addictive! Truly a game of skill.
- fantastic arcade quality game
- boots directly on basic or pascal systems
- runs on any configuration apple II with 32K

PRICE: $24.95, diskette

TITLE: HI-RES ADVENTURE #1: MISSION ASTEROID
PUBLISHED BY: ON-LINE SYSTEMS

MISSION ASTEROID takes its number from its intended level of difficulty. Less expensive to serve as an introduction to hi-res adventures, MISSION ASTEROID includes methodology hints in the course of play. It also includes the best graphics yet from the company and a delightful adventure — even for veterans — in attempting to save the earth from an asteroid within a time limit. By Ken and Roberta Williams. 48K disk.
PRICE: $19.95

TITLE: LORDS OF KARMA
PUBLISHED BY: THE AVALON HILL GAME COMPANY
AVALON HILL UNVEILS ITS FIRST COMPUTER FANTASY GAME! BALTIMORE, MD.: Quick to follow up on the success of their new line of microcomputer games The Avalon Hill Game Company releases yet another new title for this bourgeoning line. Its 6th release in just two months, LORDS OF KARMA is the first of a new series of fantasy games programmed for the home computer market.
In the adventure gaming field, fantasy is the fair-haired boy today. This latest release, titled LORDS OF KARMA, capitalizes on the demand by the consuming public for role playing games of fantasy nature.
A SOLITAIRE GAME. What sets KARMA apart from fantasy board games is its solitaire feature. The computer becomes one's eyes and ears. But the player makes all the decisions. There are almost no rules to learn because one simply tells the computer what to do by typing simple English sentences on the keyboard, like "walk north." In fact, within broad guidelines, you type in just about anything you want and the computer will actually attempt to figure out what you mean, then do what you want.
FOR TRS-80, APPLE II, AND PET. KARMA can be played on any of the following home computer systems: TRS-80 Level II 48K, Apple II 32K, and PET 32K. You will note the memory requirements are quite high, but that's how sophisticated KARMA happens to be. To avoid confusion, however, Avalon Hill combines the program for all three computers on the same cassette. One game package contains a complete set of instructions and software for all three computers, which happen to make up 95% of the home computer market.
After releasing its first five microcomputer games, Avalon Hill was surprised to note that many people bought the microcomputer games yet didn't even own a computer.

"Yes, but I have a friend who does" ... "oh, we share one at the company during lunch hours," were the typical responses to the survey.
Which means, of course, that the microcomputer game has a much greater sales potential than was originally thought. In this light, Avalon Hill is featuring its newest addition to the microcomputer line, LORDS OF KARMA, in all appropriate consumer and trade publications to maximize the sales potential of this novel computer fantasy game.
OBJECT IS TO EARN BROWNIE POINTS. Almost! At the start you find yourself in the magical universe of Karma, Just staying alive may be more than you can handle, but the lords of Karma are watching your every move and they will not let you rest until you have performed many deeds of kindness and bravery. You must explore the verdant forests, twisting trails, rugged mountains, and labyrinthine caverns, gradually learning their secrets and completing your tasks ... ever watchful of the lurking monsters waiting for lunch (you)!
No, it's not a typical Sunday afternoon at your mother-in-law's. It's as engrossing a game as you'll find anywhere ... and you don't even need another person. The computer is that other person.
In fact, according to that survey, the single most important factor in the appeal of Avalon Hill microcomputer games is that they can be played solitaire.
Imagine! An entire evening of pleasure playing LORDS OF KARMA, without the expense of leaving your home, to boot!
PRICE: $20.00

TITLE: REVERSAL
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Spracklen) Winner of the software division of the First International Man-Machine OTHELLO™ Tournament, this version of the 200-year old game. Reversal features 27 levels of play and high-resolution color graphics.
PRICE: $29.95, 07004, APPLE II tape
$34.95, 07009, APPLE II Disk

TITLE: SARGON II
PUBLISHED BY: HAYDEN BOOK COMPANY, INC.

(Spracklens) "This program represents a giant step forward in microcomputer chess ... an excellent program which will provide a true challenge for many players .. Save your money and buy SARGON II..." *80 Softare Critique.* Apple II.
PRICE: $34.95, Disk Version

TITLE: THE STAR GAZER'S GUIDE
PUBLISHED BY: SYNERGISTIC SOFTWARE

The Star Gazer's Guide puts the universe at your fingertips, letting you display at will the entire summer or winter sky of the northern hemisphere, or any specified section thereof, in great detail. The 50 programs are oriented toward teaching painlessly the locations and names of the major constellations and interesting stellar objects. Features include:
All major constellations are displayed in detail with or without outlines to identify stars and objects composing the star groupings.
Both geometrical and graphical type outlines are utilized.
Major galaxies, nebulae, clusters, double stars, etc. are pinpointed by special symbols for quick identification.
Brightest stars are identified by name and location in each constellation.
The touch of a key presents text describing the objects displayed.
Objects and constellations are identified by general sky orientation so no special equipment or training is required, but program documentation provides spatial coordinates for those interested.

The entire collection of programs is designed to make it easy to find the stellar objects you seek. Alternatively, when you find something unfamiliar, the program will help you identify your sighting.
The Star Gazer's Guide is easy to use. Menu driven, it allows you to jump instantly from any program on one subject or area of the sky to any other. A joy for amateur astronomers, students, or Apple owners who want to learn about the heavens. Informative text provides additional detail for those wanting to learn more. Requires 48K, disk, Applesoft ROM. DETAILED HIGH RESOLUTION GRAPHICS BRING THE SKY TO YOU.
PRICE: $30.00

TITLE: TAWALA'S LAST REDOUBT
PUBLISHED BY: BRODERBUND SOFTWARE

TAWALA'S LAST REDOUBT puts you in the position of rebel leader. You must intercept and decipher Tawala's secret messages to his supporters, form alliances with local chiefs, detect Tawala's spies in your midst, separate hard intelligence from enemy disinformation, avoid Tawala's military forays against you and, finally, lead the assault against the Prince's stronghold.
Minimum Configuration: APPLE Disk, 48K with APPLESOFT
PRICE: $29.95

TITLE: ZORK
PUBLISHED BY: PERSONAL SOFTWARE

Zork™ is a computer fantasy of ultimate challenge. Unearthly creatures guard treasures beyond your imagination. Mazes confound your guest. So quicken your wits and pick your path carefully through the Great Underground Empire. The least likely object may be the only thing that can save your life.
Yet, you can succeed. Discover the 20 treasures of Zork, return them to the Trophy Case and leave alive. But bring all the cunning and courage you can muster. Because in Zork, they take no prisoners ...
Zork, the Great Underground Empire, was created by Infocom, Inc., and is available for 32K Apple II and II Plus and 32K TRS-80™ Model I Level II disk systems.
Also new from Personal Software is MONTY™ Plays Monopoly, which lets an Apple or TRS-80 play America's favorite board game with the family.
Arcade Classics is a new TRS-80 action game featuring Cosmic Raiders, Pinball, Ricochet and Blockade. A great way to have fun without feeding quarters into the machines.
Zork, MONTY Plays Monopoly and Arcade Classics — more fun and games with your computer, now joining our other Strategy Games: Microchess, Gammon Gambler, Checker King, Bridge Partner and Time Trek.
See these great strategy games at your Personal Software computer retailer.

TITLE: ROBOT WAR
PUBLISHED BY: MUSE

Action-filled battle between two to five robots, players have no control over the robots once the battle starts. But each robot must have had its microcomputer brain programmed by a human before it can take to the battlefield. Once in battle, the winner is the robot running the most effective battle strategy program. Robot's brains contain an accumulator, a pair of index registers, twenty-six memory registers, and seven input/output registers that control radar scans, aiming, shooting, assessing damage, and moving. You may program up to 256 instructions into one completed robot's computer-brain. 48K, disk.

TITLE: SUPER INVASION
PUBLISHED BY: CREATIVE COMPUTING

Features high resolution graphics and antics by the moon creatures. A field of 55 aliens march across the screen showering you with lasers. As you pick them off one-by-one, your parapits wear away, and they whiz across the screen coming closer and closer to your level, with the original moon creatures and action twice as fast as any other invader game on the market. (32K). Also runs on Apple II Plus.

PRICE: $19.95

OTHER PROGRAMS AVAILABLE

Space Games-1 (16K) Rec. $7.95
Sports Games-1 (16K) Rec. $7.95
Strategy Games (16K) Rec. $7.95
Brain Games-1 (16K) Rec. $7.95
Haunted House (16K) Rec. $7.95
Air Traffic Controller (16K) Rec./Ed $9.95
Space War (16K) Rec. $14.95

ALSO RUNS ON APPLE II PLUS

Outdoor Games (16K) Rec. $9.95
Adventureland (16K) Rec. $14.95
Pirate Adventure (16K) Rec. $14.95
Mission Impossible Adventure (16K) Rec. $14.95
Voodoo Castle (16K) Rec. $14.95
CAI Programs Volume I (16K) Ed. $7.95
CAI Programs Volume II (16K) Ed. $7.95
Know Yourself (16K) Pers./Rec./Ed. $7.95

TITLE: SPACE WAR
PUBLISHED BY: CREATIVE COMPUTING

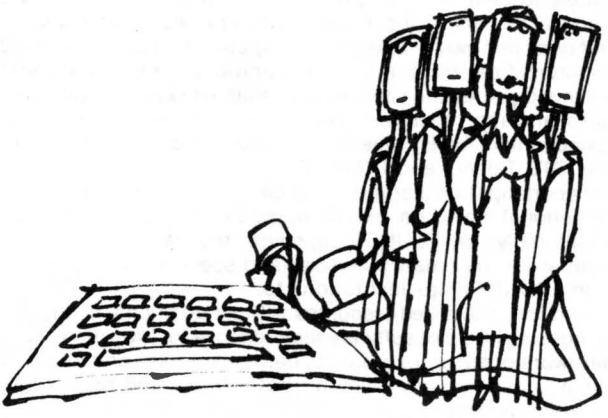
The object is the destruction of the opponents ship by missile fire, by collision with the sun, or by explosion upon re-entry from hyperspace. Space war offers you 5 different modes of operation including reverse gravity. Ships can circle behind the screen and reappear on the other side of the galaxy. All the features of the arcade game on your micro. (16K).

PRICE: $14.95



TIME SHARING

Edunet TS-1
Micronet TS-2
Source TS-3



TITLE: EDUNET

Today, through EDUNET, college and university faculty, staff, and students can gain access to more than a dozen computers on campuses other than their own. This can be done by placing a local telephone call, in any of more than 200 United States cities and over 30 foreign countries, and issuing a series of commands from an interactive terminal.

EDUNET is a network established to facilitate the sharing of computerbased resources in higher education and research. It is a membership organization of colleges, universities, and other nonprofit organizations that brings cost-sharing and resource-sharing to its members and substantially increases the computing options available to them. By using remote facilities, member institutions can respond to unusual demands for computing while paying only for what is needed. EDUNET itself does not own or operate a computer. It arranges for the supply of computer resources from some of the finest university computing centers in the United States and provides the services that enable users on other campuses to identify, access, and apply these resources. For electronic connections between clients and suppliers, EDUNET relies on commercial data communications networks such as GTE Telenet and TYMNET.

EDUNET offers participating institutions access to a vast selection of computer-assisted instructional materials, extensive data bases, and advanced research software. Additionally, for EDUNET suppliers, the network provides a broad distribution outlet for their many, unusual, and specialized resources.

Membership in EDUNET helps institutions to:

- satisfy demand for specialized resources without additional capital investment
- avoid the continuing costs of software maintenance for low-volume applications
- evaluate hardware or software products before purchase and local installation
- provide a rich computing environment that attracts and retains high-quality faculty, staff, and students
- provide computer support for new or expanded programs of study
- encourage collaboration in research and instructional development projects among faculty at different locations
- promote interinstitutional sharing among discipline groups
- keep abreast of computing activities at other institutions

TITLE: MICRONET
PUBLISHED BY: COMPUSERVE

WHAT IS MICRONET?

It is the personal computing service of CompuServe, Incorporated. CompuServe is a nationwide commercial time sharing computer network with large-scale mainframes. MicroNET allows the personal computer user access to CompuServe's large computers, software and disc storage during off-peak hours (from 6 PM to 5 AM weekdays, all day on Saturdays, Sundays and most holidays).

WHAT DO I GET?

You can use our powerful processors with X-Basic, Fortran, Pascal, Macro-10, AID or APL. You get 128K bytes of storage free (just access it at least once a month). Software includes games — including networking multi-player games — personal, business and educational programs.

In addition, there is the MicroNET National Bulletin Board for community affairs, for sale and wanted notices and the MicroNET Electronic Mail System for personal messages to other MicroNET users. You can even sell software via MicroNET.

NEW! — MicroQUOTE, a security information system for corporate stocks and public debt.

NEW! — MicroNET Software Exchange with dozens of new programs available for downloading to your personal computer at a specified charge.

NEW! — Executive programs for TRS-80, Apple II and CP/M systems (so your machine and ours can talk to each other error-free). You can switch between terminal and local mode while on line.

WHAT DO I HAVE TO HAVE TO USE MICRONET?

The standard 300 baud modem. MicroNET has local phone service in most major cities (see below) and a reduced phone charge in over a hundred others.

WHAT IS THE COST?

We've saved the best for last. There is a one-time hook-up charge of only $9.00! Operating time — billed in minutes to your VISA or MasterCharge card — is only $5.00 an hour.

WANT MORE INFORMATION?

Good. Write to us at the address below. We'll send you a full packet of information about MicroNET.

CompuServe, Personal Computing Division, Dept. A, 5000 Arlington Centre Blvd., Columbus, Ohio 43220.

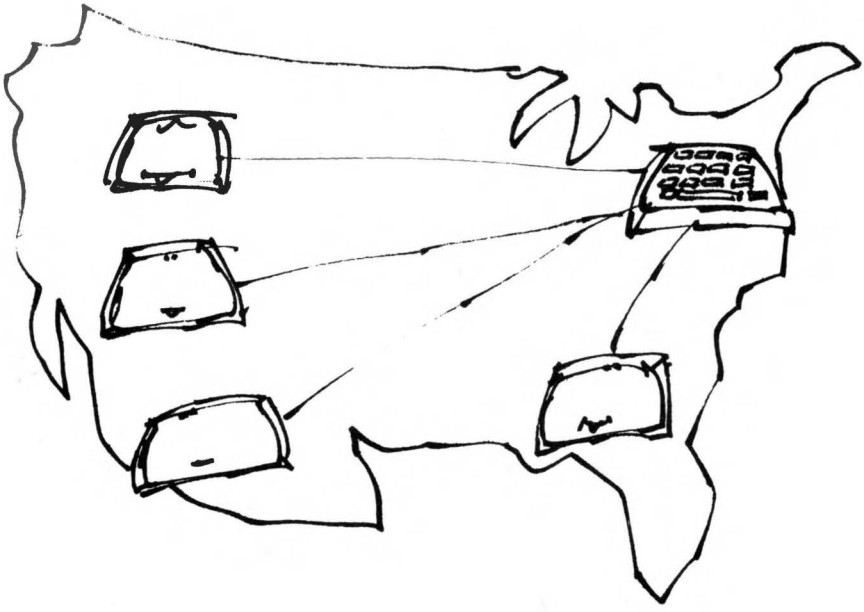
MicroNET is available via local phone calls in the following cities: Akron, Atlanta, Boston, Canton, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Dayton, Denver, Detroit, Houston, Indianapolis, Los Angeles, Louisville, Memphis, West Caldwell (NJ), New York, Philadelphia, Pittsburgh, San Francisco, Stamford (CT), St. Louis, Toledo, Tucson and Washington, D.C.

Access to the MicroNET service is available in 153 other cities for an additional charge of $4.00 per hour.

TITLE: THE SOURCE
PUBLISHED BY: SOURCE

ADVANCED APPLICATIONS AND PROGRAMS.
Reference manual and programming guides, calculator mode, file structures, editing and sorting, programming in extended BASIC, FORTRAN, COBOL, RPG, Assembly, program debugger, system commands, microprocessor cross-compilers.
BUSINESS AND FINANCE.
Accounts payable, accounts receivable, general ledger, payroll, special applications. American Stock Exchange bond prices, Federal land bank bond prices, New York Stock Exchange and bond prices, Treasury bills, World Bank bond prices, Commodity prices and futures, earnings reports, financial commentary, financial news and heading, foreign exchange rates, stock market averages, closing statistics, news, quotations, summaries, Treasury bill auction reports.
DAILY NEWS AND FEATURES.
UPI General wire service, Washington hotline, international and domestic news, business and financial news, sports news, UPI syndicated features, daily new summary.
EDUCATION.
Teaching a child to count, days of the week for children, alphabet for children, adding longer numbers and decimals for children, changing numbers from base 10 to base 2-9, finding the greatest common divisor, spelling facts about months, typewriter keyboard drills, arithmetic, correct spelling of "ie" and "ei" words, plurals of words. French language drill, German vocabulary drill, Italian vocabulary drill, algebra, geometry, social science, student consumer's guide, Federal financial aid programs.
NATIONAL REAL ESTATE LOCATOR SERVICES
NEW YORK TIMES CONSUMER DATA BASE
MAIL CALL.
The Electornic Mail System, sending and receiving messages to other SOURCE users, toll-free voice access anywhere in the U.S., Datapost hard-copy letter delivery anywhere in the U.S.
HOME ENTERTAINMENT.
Computer game library, wine tasting information, wine market report, gourmet meal recipes, special diet recipes, syndicated features on home entertainment, chess club, backgammon, bridge.
PERSONAL FINANCE.
After tax yield-to maturity of a bond, analysis of payment or withdrawal, amortization of house payments, annual interest rates on installment loans, balancing of checkbooks, income tax assistance, loan amortization schedule, monthly payments on simple annuity debts, mortgage analysis, missing variable, price of accrued interest for a bond, financial news and commentary, buying and selling a home, financing a home, home buying and selling service, FHA, VA, or conventional mortgage qualifications.
TRAVEL CLUB.
Electronic reservation and confirmation service, airport pick-up of tickets, automatic billing to credit card, airline schedule review, motel/hotel and rental car reservations.
SCIENCE AND ENGINEERING.
Electrical engineering, general mathematics, mechanical engineering, computer simulations, statistics.
STARCAST.
Biorhythms, past, present, or future, daily horoscope.
MONEY-SAVER BUYING SERVICE.
20%-40% savings on major appliances, televisions, stereo and hi-fi equipment, VTR's, cameras, furniture and carpeting, watches, crystal, calculators, tires, and

power tools, instant ordering, home delivery, automatically charged to your credit card, nation-wide search for lowest price on selected items.
MORE SERVICES ARE BEING ADDED EVERY WEEK.
The SOURCE information utility is compatible with almost any terminal or personal computer.
WELCOME TO THE SOURCE INFORMATION UTILITY.
The new terminal-accessed information service that fits your home and office with communication, knowledge, and fun, at the touch of a button ... for as little as $2.75 per hour.



WORD PROCESSING/TEXT EDITORS/FORMATTER

Apple Pie + Formatter WP-1
Apple II Report Textwrite WP-1
Appen I Text Editor WP-1
Apple-Scribe-2 ..... WP-1
Appletext WP-2
Applewriter WP-2
Correspondent WP-3
Datacope Scribe WP-4
Dr. Memory WP-5
Easymover WP-6
Easywriter WP-7
Programma Improved Editor WP-8
Form Letter WP-8
Form-Ur-Doc WP-8
Format WP-8
Letter Master WP-9
Letter Perfect WP-9
Magic Wand WP-10
Magic Window WP-11
Report Writer WP-11
Supertext II WP-11
Super-Text Add-On Modules WP-13
Txt/Ed 2.0 ..... WP-13
Text Editor WP-13
Text File Editor WP-14
Text Power WP-14
Text Editor I WP-14
Word Power WP-15
Word Processor WP-15
Word Processor WP-15
Word Processor I WP-15
Word Processing WP-15
Word Processing System WP-16
Write-On! I WP-16
Write-On! II WP-17



WP

TITLE: APPLE PIE + FORMATTER
PUBLISHED BY: PROGRAMMA

Apple PIE (Programma International Editor) and FORMAT (text formatter) offer full strength solutions to today's word processing problems. These versatile, powerful programs provide document preparation and word processing capabilities previously found only on much larger computer systems.

PIE is a general purpose, full screen editor that uses control keys and function buttons to provide a full range of editing capabilities such as search and replace, delete, copy, insert, move. Changes may be made directly anywhere on the screen and are shown as they are performed.

FORMAT uses simple instructions embedded in the input text to describe the desired appearance of the final document. It handles centering, underlining, indenting, page numbering, margins, headers, footers, even form letters, and includes a proofing capability.

These high quality, cost-effective programs come with comprehensive documentation and run on a 32K Apple II. They are available through your local computer store or direct from Programma International, Inc.

PRICE: $79.95

TITLE: APPLE II REPORT TEXTWRITE
PUBLISHED BY: SERVCES UNIQUE, INC.

Services Unique introduces Disk Apple II Report Textwrite software designed to allow free form file input without regard to either line or page length. It assembles text into physical lines and pages using pre-defined operator or file parameters.

PRICE: $19.95

TITLE: APPEN I TEXT EDITOR
PUBLISHED BY: MUSE
HARDWARE: INTEGER BASIC PRINTER

A real text editor for cassette based Apple II computers. Insert, delete or change lines of text in the computer's memory. A 'FIND' command will locate all occurences of a specified text string. Save your text on tape and recall it later or merge it with another file. 1001 uses in the home-menus, birthdates, addresses, and phone numbers, appointments, etc. Easily links to your printer. Complete with easy-to-understand user's guide.

PRICE: TAPE, 17.95

TITLE: APPLE-SCRIBE-2
PUBLISHED BY: PYGMY PROGRAMMING
MEMORY: 16K

Apple-Scribe-2 is a non-line oriented text editor. It can be used from either tape or disk, without any modifications to the computer.

Some of the features of Apple-Scribe-2 are:

- Complete curser control
- High-speed search with universal or individual replacement
- Block move/delete
- Right-hand justified print
- Storage of text on tape or disk
- Selectable margins, line spacing and indent (defined as flag characters in the text)
- Automatic page numbering and headings

■ Upper/lower case letters (displated as inverses)

Apple-Scribe-2 occupies approximately 9K of memory, plus the 2 K already reserved by the Apple. It stores text in a one byte per character form, making the best use of available memory space.

PRICE: $59.95

TITLE: APPLETEXT - AN APPLE II Diassembler
This program translates Apple machine resident code to a text line
PUBLISHED BY: MICRO PRODUCTS

This program translates Apple machine resident code to atext file that is compatible with the MICROPRODUCTS Co-Resident Assembler. This is accomplished in a two pass operation.

1. The first pass creates label statements. (.DL) for all external references. The "STAR" statement is also created in this pass.

2. The second pass translates machine instructions to text statements:

   a. Immediate mode operands are identified.
   b. Zero page operands are identified.
   c. Internal references are resolved.
   d. A .EN statement is created.

Appletext enables the user to create text files from machine resident code. This file may be created for either an entier program or for selected routines. For example, portions of the Apple monitor may be selected, translated and modified using the Co-Resident Assembler. This modified code may then be programmed on an EPROM using the MICROPRODUCTS EPROM Programmer. Appletext resides at HEX LOCAZTION 1000 THE TEXT FILE RESIDES AT HEX LOCATION 3600
Instructions for relocating these positions are contained in paragraph entitled 'Relocating Appletext'.

PRICE: Cassette 29.95
Diskette 33.95

TITLE: APPLEWRITER
PUBLISHED BY: APPLE COMPUTER
MEMORY: 48K RAM
HARDWARE: 1 DISK DRIVE PRINTER & INTERFACE (opt.)

The APPLE WRITER gives you the ability to edit memos, letters, programs, or even a novel. You can enter text, delete mistakes, move blocks of text, save and insert segments from a diskette, and search throughout the text to replace letters, words, or phrases automatically. Using the APPLE WRITER with a printer, you can print your edited material on paper, letter-perfect every time. The APPLE WRITER is packaged with a manual and a program diskette.

TITLE: THE CORRESPONDENT
PUBLISHED BY: SOUTHEASTERN DATA SYSTEMS
TITLE: DR. MEMORY

Now from S.D.S.! An affordable text editor that allows you to write letters and other materials on your Apple II! It can also be used as a very fast database for storing notes, phone lists, or anything where report generation is not essential.

JUST LOOK AT THESE FEATURES:

Copy/Move/Delete whole paragraphs of text.

Supports upper/lower case

Right had justification of printer output.

Allows special control characters for your printer.

Character on line editing.

40-80 column output. Screen scrolls up, down, left and right. Even freeze portions, or create your own separate note pages.

User oriented: Text appears on screen just like it will be output - no confusing formatting characters.

Link files to print out entire text at once on manuscripts.

Extremely fast find routine makes it invaluable as a database. Just enter data s you would on a piece of paper. Use the find routine to retrieve any information instantly.

Access sequential or random text files. Useful for not only the editing capabilities, but the examine and transfer data files. The Correspondent can even be used to build your own EXEC files.

Special routines are provided to put the bi-directional scrolling of either pg. 1 or 2 of text/gr in your own programs.

Simple move to either beginning or end of file, or to a block marker of your choice.

Screen tabbing, variable page length and width.

Automatic line centering.

Save all or part of any file to disk.

The Correspondent just has to be seen to be believed! Ask your local dealer

PRICE: 34.95

TITLE: THE DATACOPE SCRIBE
PUBLISHED BY: DATACOPE

Dan Bunten of Management Systems Engineering recognized the need: a professional word processor for the Apple II. When he showed us his earliest version, we were excited! We encouraged Dan as he polished it into a real work of art, indeed a masterpiece of quality.

Over a year in writing, testing, and revising, Scribe emerges the definitive word processor for the Apple II.

WHAT IS THE DATACOPE SCRIBE?

It is a comprehensive word processing program for the Apple II. designed to be simple to learn and use. Incredible power, combined with ease of use, puts the Datacope Scribe in a class of its own.

WHO USES THE SCRIBE?

Teachers, librarians, secretaries, programmers, authors, engineers, salesmen, lawyers, doctors, reporters, students, computer dealers use the Datacope Scribe. Virtually any writer, correspondent, or editor can use Scribe.

WHEN IS THE DATACOPE SCRIBE USED?

Anytime you need to write. Personal letters, business letters, manuscripts, program instructions, reports, resumes, books, ad copy, brochures — all are easier to write using the Datacope Scribe. Repetitive work, particularly form letters and legal documents, becomes a snap.

WHAT WILL IT DO FOR ME?

Scribe makes a creative pleasure of a once laborious task. Gone is the tedium, the erasers, reams of wasted paper. Gone are the reasons for avoiding writing. To write, edit, store, rearrange and print becomes easy with the Datacope Scribe. Storage on diskette takes less space than paper, and text is more easily accessed and edited.

WHAT ARE THE EQUIPMENT REQUIREMENTS?

The Apple II, Apple II Plus with 48K RAM, or Apple Language System with Dan Paymar's Lower Case Adapter and at least one Disk II dirve. More than one Disk II drive is permissible.

WHAT IS DAN PAYMAR'S LOWER CASE ADAPTER?

The Lower Case Adapter is an easily-installed plug-in device that allows the Apple II to display lower case characters.

HOW MUCH TEXT CAN I GET IN MEMORY?

At approximately 2000 characters per full page, you can put eleven pages in memory, along with Scribe and its help files. Without the help files, fifteen pages.

HOW MUCH TEXT CAN I GET ON A DISKETTE?

Roughly 100,000 characters can be stored on a diskette, therefore you should be able to store at least fifty pages.

WILL I NEED TO MODIFY THE SYSTEM TO MAKE IT WORK WITH MY PRINTER?

The system can modify itself to work with any printer that interfaces properly to an Apple, including printers that are turned on by a CALL. You may also take advantage of special features — such as double wide characters and variable line spacing — that your printer offers.

HOW FAST WILL THE PROGRAM ACCEPT TEXT?

Faster than you can type. The entry and display routine is quicker than the Apple's monitor input.

IS SCRIBE EASY TO LEARN?

Yes! The commands are straight-forward single-letter mnemonics, and easy to remember. You actually see what is happening when you edit text. Best of all, two quick-reference guides are available at any time to help you remember the commands.

CAN SCRIBE PERFORM PRODUCTION PRINTING?

Yes. When you are ready to print, you simply tell the Datacope Scribe how many

copies to print and it will continue unassisted. If you need to include different names or addresses in each copy, simply tell Scribe to stop printing, accept text from the keyboard, and insert it into each copy.

CAN I GET FANCY FORMATS?

Yes. You can specify the left and right margins, right margin justified or right margin ragged, single or double spacing, tab positions, page numbering, and number of lines per page. Most of the formats may be specified at any point in the text, allowing many special possibilities, and the formats can be changed at any time. In addition to these general format specifications there are specific format commands such as center, indent, and underline.

WHY IS TEXT SO EASY TO EDIT WITH THE DATACOPE SCRIBE?

Although it is a lot more difficult to program, character editing is the most convenient method for the user. The Datacope Scribe is a character editor that also edits by word, sentence, paragraph, or any arbitrary group.

WHAT DOES CHARACTER EDITING DO?

Character editing allows you to change any character, or group of characters, at any point in your text without worrying about artificial restraints placed on you by a lazy programmer. There is no need to worry about how the change will affect line length or formatting. The Datacope Scribe handles all formatting and text expansion.

MUST I READ THROUGH TEXT TO FIND WORDS OR SECTIONS THAT I WANT TO CHANGE?

No! Scribe incorporates a Find command that immediately moves the cursor to the next occurrence of any character, word, or group of words. The Find command also allows you to search for repetitive occurrences of text.

DOES SCRIBE OFFER BLOCK EDITING COMMANDS?

Yes, Scribe includes the block editing commands Remove, Get, Delete and Insert. Remove extracts a selected portion of text and saves it in a safe area of memory. You may later Get this portion and Insert it at any point. This is a block move operation. Delete simply erases a selected portion of text, and automatically closes up the gap created by this action. Finally, Insert allows you to type anywhere within the text, opening just enough space for the new copy.

WHAT DOES THE PACKAGE INCLUDE?

All of Datacope's software is recorded on high-quality 5¼ inch diskettes. Included is the diskette and a full-size comprehensive manual. The diskette has the Datacope Scribe system and various sample texts.

IS THERE A WARRANTY?

Yes. The Datacope Scribe is covered by a 90-day limited warranty. A copy of the warranty may be obtained by writing Datacope.

WHAT DO I DO ABOUT BACKUP?

Since the Datacope Scribe is copyrighted and recorded on copy-protected diskettes, you may purchase a second unit for a nominal fee when you return the serial numbered software registration card with proof of purchase. Datacope also offers quick replacement on warranty service.

PRICE: $79.95

DR. MEMORY
PUBLISHED BY: MUSE SOFTWARE

Dr. Memory is a powerful disk based word processor that was designed specifically for the Apple II. Finally, a full function word processor that includes Upper and Lower case plus printer controls. Variable page size, left and right margins, automatic paragraphing and more. A must for every home and office. 32K.

PRICE: $49.95 Diskette

TITLE: EASYMOVER
PUBLISHED BY: INFORMATION UNLIMITED
MEMORY: 48K RAM

EasyMover is the first **"Personal Electronic Mail System"** which combines the versatility of a word processor with the ability to MOVE or transmit text files to another APPLE-II computer, and then MOVES your text acrossstandard phone lines.

This means that within seconds, night or day, you can "mail" important letters, memos, manuscripts, etc. The people on the receiving end can then utilize the complete editing facilities of their EasyWriter system. The system uses the Microcoupler modem from D. C. Hayes or any other modem through an Apple Communication Card.

EasyMover mocks government and large corporation electronic mail systems, but boasts ten times the power for one-tenth the price!

EasyMover utilizes several 'MENU' screens, making the system easy to learn and use — in the style that current EasyWriter users are accustomed.

EasyMover makes the future goal of **"Communications Instead of Transportation"** a reality today.

FEATURES

- Complete text editing using the EasyWriter word processing system
- Instant mailing service at post card prices
- Immediate delivery anywhere in the world (in most cases)
- Single key stroke menu-driven commands
- Auto-dialing
- Auto re-try after busy signal

TITLE: THE PROFESSIONAL SYSTEM EASYWRITER
PUBLISHED BY: INFORMATION UNLIMITED
MEMORY: 48K RAM
HARDWARE: DISK DRIVE
PRINTER
EASYWRITER WORD PROCESSING SYSTEM

The new system also utilizes special features of your letter quality word processing printer, bi-directional printing, bold face printing, underlining, and incremental spacing justification.

PROFESSIONAL SYSTEM FEATURES:

- 80-column display of upper and lower case characters on your APPLE-II video monitor
- Printer Perfect Video Display
- Line-oriented editor
- Adding, inserting, deleting and correcting existing files
- Horizontal and Vertical Scrolling through text
- Left, Right and Center screen justification
- Moving blocks of text
- Word wrap-around
- Easy printer configuration
- Line or Word counting
- Global and Selective Search & Replace
- With Qume, Diablo and Spinwriter printers, the following can be accomplished: bold face type, incremental space justification, underlining, subscripts, superscripts, and bi-directional printing.

APPLICATIONS

- Professional Writers - Manuscripts and rough drafts
- Lawyers - Contracts, briefs, etc.
- Business offices - Customer communications, product advertisings
- Personal users - Thank you notes, papers, letters, etc.
- Many other text editing jobs.

PRICE: DISK 250.00

TITLE: PROGRAMMA IMPROVED EDITOR
PUBLISHED BY: PROGRAMMA
MEMORY: 32K

Over 25 commands permit the cursor to be located anywhere on the screen, moved forward or backward a full page, search for a string, append, insert, delete, backspace, set horizontal tabs, and page scroll. Commands are extremely simple to implement, consisting each of a single character depresse simultaneously with the SHIFT key. Any command may be preceded by a numeric or string argument.

PRICE: TAPE, 19.95
DISK, 24.95

TITLE: FORM LETTER
PUBLISHED BY: MICRO SOFTWARE SYSTEMS
MEMORY: 32K

This program takes a letter written with the Text Editor, and the list file from the Mailing List program and prints a copy of the letter for each name on the list. Using special strings, any information from the mailing list file may be embedded in the letter. The Form Letter program requires a 32K system or larger and is, of course, written in Applesoft II.

PRICE: 24.95

TITLE: FORM-UR-DOC
PUBLISHED BY: DARRELLS APPLESOFT INC.

(A document formatter and printer). Uses the file that was created by the Appleditor. Commands are embedded in the Appleditor file. These commands allow the user to control the top, bottom, left and rights margins; to enter a heading and footing; to center a line; to right justify your test; control line spacing; print lines as is without modification;...the list of commands goes on. The input record lengths (line lengths) from the Appleditor file can range from 39 to 150 characters long.

PRICE: 30.00

TITLE: FORMAT
PUBLISHED BY: PROGRAMMA
MEMORY: 16K

A text processing system with commands imbedded in the actual text perform the formatting functions. Twenty-two commands permit control of margins, spacing, indention, centering, underlining, head and foot titles. An option is available to provide right margin justification.
Users with upper case only keyboard and CRT, but with upper/lower case printer can obtain an option designed to generate lower case characters in the printer output.
The following commands are available with FORMAT:
.ad Begin adjusting right margins
.bp n Begin page numbered n
.br Cause a line break
.ce n Center next n lines without fill
.fi Start filling output lines
.fo t Foot title becomes t

.he t Head title becomes t
.in n Indent n spaces from left margin
.li n Literal, next n lines are text
.ll n Line length including indent is n
.ls n Set line spacing to n
.ml n Top spacing including head title
.m2 n Spacing after heading title
m3 n Spacing before foot title
m4 n Bottom spacing including foot title
.na Stop adjusting right margins
.nf Stop filling output lines
.pl n Page length is n lines
.pp n Begin paragraph @ .sp, .fi, .ti, n
.sp n Space down n lines, except at top
.ti n Temporary indent of n
.ul n Underline next n input lines

PRICE: TAPE. 19.95
DISK, 24.94

TITLE: LETTER MASTER
PUBLISHED BY:

This is a lightning fast Word Processor which is simple to use and operates like a character oriented system. It features a menu driven operating system which allows entry, storage, editing, draft printing, and final justified printing. Editing includes line corrections (add up to 200 characters if you want), global search, string replacement, delete, add, and merge. Text floats as needed to mark up lines of text. Print justified, unjustified, or a mixture. System prepares and prints form letters with its own 500 name/diskette full feature mailing list program. Appplesoft II Disc.

PRICE: $139.95

TITLE: LETTER PERFECT
PUBLISHED BY: HIGH TECH

FEATURES---

Letter perfect is a dedicated word processor

As such it was designed with producing formatted documents specifically so the system is not a 'patch-job' of a program intended for other purposes.

Letter Perfect is easy to use

All esential key functions were designed with the secretary in mind. Every effort was made to have the key codes make mnemonic sense for easy remembering. We have seen secretaries with no previous computer background put out 'LETTER PERFECT' documents in as few as 15 minutes from the time they first saw the product.

Letter Prefect works on all Apples

LETTER PERFECT is all in machine code so that it will work on any Apple II or Apple II Plus computer regardless of language configuration. Minimum requirements are 32K of ram and at least one disk drive.

Letter Perfect is self configuring

The system will support most any printer and any disk with either device being in any slot the user so wishes. A large selection of print drivers is included so that the user need no computer orientation to get his or her system 'up-and-running.'

Letter Perfect supports proportional spacing
The system will support boldfaced, supscripts, superscripts, underlining and proportional spacing on the Qume, Diablo and NEC Spinwriter printers. With it's ease of use, LETTER PERFECT will not only help sell systems, but will also justify to the customer the higher quality and higher priced printers.
Letter Perfect is self contained
The system, once loaded in memory, is always there in one compact module so that the user never need worry on swapping out disks to go to his printer. The program is compact enough to allows over 30K of text ememory space on a 48K system with over a 2000 byte buffer of packed information being pigeonholed for moving, etc. Data going to the memory or to the disk is automatically packed for minimal storage requirements (this feature is transparent to the user).
Letter Perfect allows non-printing text commenting
This feature helps one to come back months later and figure out the purpose of a particualr document.
Letter Perfect has a split catalog
This feature allows for more files to be viewed at any one time. The dynamic error handling allows the user to free themselves of worrys over any typographical errors that they may make in making file selections.
Letter Perfect has no memory limitations

TITLE: MAGIC WAND

MAGIC WAND is the most powerful, most flexible, most reliable, most usable word processing software available for a CP/M-based computer.
That's not bragging. That's just telling it like it is.
The MAGIC WAND is the best word processing software ever written for a microcomputer. It can do more work in less time with higher quality than any other product you can buy.
The MAGIC WAND is a rock solid piece of software. The command structure is simple and logical and complete. We have not tossed in features without thought to the overall design of the package. Nor have we included any feature that is not thoroughly implemented. The programs are crash-proof and completely reliable.
And the system is supported by what we are told is the best user's manual ever produced for microcomputer software. It contains a step-by-step instructional program designed for the novice. The trainee uses sample files from the system disk and compares his work to simulated screens and printouts in the manual.
Support doesn't stop when you buy the package. As a registered user, you receive our bi-monthly newsletter which answrs questions, reports upgrades and teaches new applications of the MAGIC WAND.
It's through a lot of hard work that we are able to offer you a product that is "almost perfect," but we aren't about to stop working until we can say that the MAGIC WAND is perfect.
FULL SCREEN TEXT EDITING — The MAGIC WAND has probably the most responsive and easy-to-use editor available for either a serial or DMA terminal. It uses only single stroke control keys to give command and takes advantage of the special function keys on your terminal whenever possible. In addition, you can set up library files with coded sections that you can merge by section name.
FULL TEXT FORMATTING COMMANDS - The MAGIC WAND allows you to set the left, right, top and bottom margins, page length, indentation, paragraph indentation, (including "hanging" paragraphs), text left flush, right flush, justified (two ways), literal or centered, variable line and pitch settings, variable spacing (including half lines), bold face, underlining (solid or broken), conditional

hyphenation, sub- and superscripting. You may change any of these commands at run-time without reformatting the file.
MERGING WITH EXTERNAL DATA FILES - You may access any external data file, with either fixed length or sequential records. The MAGIC WAND converts the record into variables that you define and can use like any other variable. Of course, you may use the data for automatic form letter generation. But you can also use it for report generation.
VARIABLES - You may define up to 128 variables with names of up to seven characters. The current value of a variable may be up to 55 characters, and you may print it at any point in the text without affecting the current format. Although the MAGIC WAND stores the variables as strings, you may also treat them as integer numbers or format them with commas and a decimal point. You may increment or decrement numeric variables or use them in formatting commands.
CONDITIONAL COMMANNDS - You may give any print command based on a run-time test of a pre-defined condition. The conditional test uses a straightforward IF statement, which allows you to test any logical condition of a variable. You may skip over unneeded portions of the file, select specific records to print, store more than one document in a single file, etc.
TRUE PROPORTIONAL PRINTING - The MAGIC WAND supports proportional print elements on NEC, Diablo and Qume printers. Other formatting commands, including justified columns, boldface, underline, etc., are fully functional while using proportional logic.

TITLE: MAGIC WINDOW
PUBLISHED BY: ARTSCI INC.

The MAGIC WINDOW is an APPLE II word processing/text editing system that is designed to increase your office productivity — all those time-copnsuming typing tasks can be done quickly and efficiently.
80 COLUMNS — The MAGIC WINDOW is a special software system that allows you to type up to 80 characters per line!!! This allows you to see your letter, report, etc., the exact way it will be printed. Inserting, deleting, centering, and justifying, can be done on the screen without the need to print a work copy.
The real power and sophistication of a word processor is judged by how simple it is to operate. And the MAGIC WINDOW is as easy to use as a standard typewriter, yet it has the power a professional requires.
PRICE: $99.95

TITLE: REPORT WRITER
PUBLISHED BY: COMPUTER HOUSE DIV.

Allows the user to produce letters or text of a professional quality, having; right margin justified, indented paragraphs, any width columns, insert a different name in paragraphs, insert a different name and address at top of page, insert whole paragraph, make multiple original copies without mistakes, edit on the screen, etc.
PRICE: $108.00

TITLE: SUPERTEXT II
PUBLISHED BY: MUSE

OPERATING SYSTEM — Apple II or II plus with 48K and disk drive.
LANGUAGE OF SUPER-TEXT II SOFTWARE — 6502 Assembly ... gives extremely fast editing response.
PROGRAM DISK PROTECTION — A backup copy of the program disk is provided.
TEXT CREATION AND EDITING FEATURES — Super-Text II includes a character-oriented, floating cursor edit with Add, Change, Math, Print and

Preview modes. Among the standard features retained from the original Super-Text are:
• Single key cursor control • Automatic word overflow • Character, word and line insertion • Forward and backward scrolling • Automatic on-screen tabbing • Automatic paragraph indentation • Character, word and line deletion • Ditto key • Single key for entering "the" • Block copy, save and delete • Advanced file-handling • Global (multi-file) search and replace • Column decimal alignment • Left and Right justification of columns • Automatic user-positioned page numbering • Chapter relative page numbering • Complete printer tab controls in text files • Line centering • Superscripting and subscripting • On-screen lower case with MUSE Data Shift Lower Case Adapter (Paymar also supported) • Shift key modification compatible • Split-Screen allows the user to view and edit two portions of a file simultaneously • Math Mode provides a built-in 15 digit floating point calculator which performs on-screen calculations, column totals and verifies numeric data in statistical documents.
LENGTH AND LINKAGE OF FILES — Maximum file size equals 20,049 characters. Automatic file linkage (AutoLink) provides unlimited file size when doing find, find and replace, preview or printing operations.
PAGE PREVIEW PROVIDED — Yes. Preview mode allows viewing a file exactly as it would print for inspection of page breaks and text formatting. The preview mode carries through AutoLink operations allowing inspection of extremely large documents.
TEXT CAPACITY OF SCREEN — 23 lines by 40 characters
STORAGE OF TEXT ON DISK — Manually at any time, automatically during AutoLink.
FILE BACKUP — Dual disk copy program is included on the program disk. Files may also be loaded and saved on a blank disk individually.
AUTOMATIC PAGINATION AND PAGE NUMBERING FEATURES — Page breaks are automatic based upon number of lines per page and may be forced at any point using a control character in the text file. Page numbering is automatic but may be suppressed. Location of the page number is user selectable. Chapter relative page numbering is also provided.
PRINTERS SUPPORTED — Any printer which will interface with an Apple computer.
RIGHT JUSTIFICATION TECHNIQUE — Provided by variable between word spacing.
SPECIAL PRINTING FEATURES AVAILABLE — Features include; underline, boldface, superscript, subscript. Other special printer features, including multiple character fonts, may be defined by the user.
ON-SCREEN DISPLAY OF SPECIAL PRINTER FUNCTIONS — Inverse characters are displayed on the screen to indicate special features. These control characters are not displayed in preview mode.
CONTROL CHARACTERS — All printer control characters are inverse so there is no conflict with printable characters. However, a user may define any printer control sequence.

PRICE: $150.00

TITLE: SUPER-TEXT ADD-ON MODULES
PUBLISHED BY: MUSE SOFTWARE

For Even More Versatility
Personalize and customize form letters with the ultimate letter writer, the Super-Text Form Letter Module. Use it with the Addres Book Mailing LIst Program or by itself to end repetitious composition of letters, contracts, leases, and other documents. Add the Super-Text Terminal Module and a D.C. Hayes Micromodem to communicate with any computer in the world.
Apple II or Apple II Plus (48K)
PRICE: $100.00 Form Letter Module
$49.95 Address Book Mailing List Program
$75.00 Super-Text Terminal Module

TITLE: TXT/ED 2.0 (Word Processor)
PUBLISHED BY: SYSTEMS DESIGN LAB

TXT/ED is a powerful word processing system. This word processor supports over 40 commands relating to entry of data, editing, disk input/output, data display and text formatting. Major features of TXT/ED 2.0 include: Full Right margin Justification, Selective saving of all or part of text Upper and Lower case (compatible with the paymar adapter), Merging of Multiple disk files, Global search and changes, Move line or paragraphs, Center line or paragraphs, Report generator and text formatting, Up to 9 tab stops for technical reporting, Exclusive editor status command, Creation of Apple Exec text files, Converts applesoft programs to text files for program editing and debugging, No imbedded control characters, forward and backword scrolling, supports most printers. Text/ED is truly the Ultimate in Word Processing.
32K -48K.
PRICE: $79.95

TITLE: TEXT EDITOR
PUBLISHED BY: MICRO SOFTWARE SYSTEMS
MEMORY: 48K APPLE-II PLUS OR 48K APPLE II WITH APPLESOFT ROM OR LANGUAGE CARD
HARDWARE: ONE DISK DRIVE
PRINTER

The Peripherals Unlimited Text Editor is a fast, simple to use program designed for the small business or personal user. Text is processed in memory on a line by line basis. When the user is finished with the text, he may print it and/or save all or part of it to disk for later use.

Upper and lower case operation is fully supported. Upper case letters are shown on the monitor as inverse video. If the computer has a hardware adapter (such as the Dan Paymar board) true upper/lower case is displayed.

FEATURES

- Files may be loaded, appended or inserted into text already in memory. All or part of the text may be saved for later use.
- Files are saved on disk in standard text format. Basic programs saved as text files may be edited and later EXEC'd into the system. Ideal for creating EXEC files.
- Line width is used controlled.
- Advanced left/right fill justification.
- Very fast FIND capability, optional printer log of found strings.
- Global string replace.

■ This program may be used in conjunction with our Mailing List and Form Letter program to create personalized letters.
■ Text may be printed justified or assis, with or without line numbers, page numbers or title. Printing format determined by the user, or user defined defaults.

CAPACITY:

■ Approximately 250 lines of 80 characters may be held in memory at any one time. (About 5 printed pages)
■ If a file is being saved to a full diskette, you are told that the diskette is full, giving you the opportunity to save the text on a different diskette.

SPEED:

■ Justification of text: Approximately 3 lines/second.
■ Find and Replace functions: 2 seconds per 300 text lines.
■ Delete: up to entire text in 3 seconds.
■ Print speed depends upon type of printer and driver card.

PRICE: $64.95

TITLE: TEXT FILE EDITOR (for sequential text fiels)
PUBLISHED BY: EDU-WARE
MEMORY: 32K
HARDWARE: DISK

This verstile editor can take the hassle out of working with sequential files, as well as make them do more for you. Editor can be used to create, combine or manipulate files using 3.1 or 3.2 releases of DOS. A 17-page manual contains instructional, reference and modification material, suiting both the lifeline programmer and the beginning disk-booter. Can also be used to unlock the secret hidden in the files of Compu-Read, Sinata, Subliminal, Network and Terrorist.

PRICE: DISK, 24.95

TITLE: TEXT POWER
PUBLISHED BY: SYSTEMS DESIGN LAB

TEXT POWER is a powerful word processor that supports over 50 easy to use commands relating to entry of data, editing, disk input/output, data display and text formatting. This software package has over 50 pages of comprehensive documentation and the major features include: Sup'r' Terminal and Videoterm 80 Column Board Compatibility, Dan Paymar Lower Case Adapter Compatibility, Report Formatter, Optional Dual Column Print Format, Multiple File Merging, Global Search and Changers, Move and Duplicate Line or Paragraphs, Supports Multiple Disk Drives, Full Scrolling and Stop List Functions.

PRICE $79.95

TITLE: TEXT EDITOR I (Letter Writer)
PUBLISHED BY: DYNACOMP, INC.

An easy to use, line-oriented text editor which provides variable line widths and simple paragraph indexing. This text editor is ideally suited for composing letters and is quite capable of handling much larger jobs.

PRICE: $14.95 postpaid

TITLE: WORD POWER
PUBLISHED BY: SYSTEMS DESIGN LAB

WORD PROCESSING AND MAILING MANAGEMENT SYSTEM FOR APPLE COMPUTERS. This new business package developed by JERRY RIVERS features one of the most comprehensive Word Processing and Mailing Management Systems available. The word procesor, called TEXT POWER, and the mailing system, called MAIL POWER, can be used independently or linked together to make Form Letter Processing a reality. WORD POWER is compatible with the DAN PAYMAR Lower-Case adapter and the SUP'R' TERMINAL and VIDEOTERM 80 column boards. This complete business package is now available at your local dealer.

PRICE $99.95

TITLE: WORD PROCESSOR
PUBLISHED BY: HOWARD SOFTWARE SERVICES
MEMORY: 48K, APPLESOFT

Includes deluxe features of expensive alternatives. True lower case display, forward and reverse scroll, character-by-character or block editing, multiple disk-linked editing & filing, right justify, center, full dynamic display & print control.

PRICE: DISK 99.00

TITLE: WORD PROCESSOR
PUBLISHED BY: COMPUTER SOLUTIONS

The software allows true upper/lower case on the APPLE, and its human engineering makes it quite different from other word processors presently available for the APPLE. Full mailmerge facilities are included in the system.

PRICE: $295 Software and Manual

TITLE: WORD PROCESSOR I
PUBLISHED BY: ECLECTIC RENTALS INC.

Superchip Word Processor is a program that permits one to prepare and print textual documents on the Apple II. The system was designed to facilitate the preparation of personal correspondence and small papers. It is not intended to replace commercially available word processing systems which have features such as cutting and pasting. A system which can perform these and other sophisticated editing functions is still under development and will be made available, at a greater cost, in the future. Word Processor I requires an Apple II with at least 32K, a Disk II drive and a printer, a Superchip and the Superchip Disk interface program. The program is coded in integer Basic but uses several machine language subroutines.

PRICE: $19.95

TITLE: WORD PROCESSING
PUBLISHED BY: COMPUTER HOUSE DIV.

This program allows you to do the following tasks normally done on much more expensive equipment to more fully utilize the microcomputer. Automatic printout of recorded text, personalized form letters, form letters with variable data block merge, immediate access or storage of documents, document assembly via commonly used paragraphs, block delete, forward and backward scrolling, full screen editing, character, word and line insertion and deleting, advance file handling, line centering, right margin justification, column decimal alignment, automatic word wrap around and many more.

PRICE: $300.00

TITLE: WORD PROCESSING SYSTEM
PUBLISHED BY: PROGRAMMA INTERNATIONAL

WORD PROCESSING SYSTEM (PIE) is a text editor which allows the user to view and edit text files in an easy and natural way. PIE presents the user with a picture of the text file being edited, just as it would appear when printed out on paper. Changes are made directly on the screen and are shown as they are performed. The user is free to enter characters at any position on the screen, rather than having to type text line by line. The command language consists of function keys (buttons) which are marked with the operations they perform.

Changes can be made to a file by typing directly on the screen. A character is changed by typing a new character over it. More complicated operations are possible, such as inserting, deleting, or moving characters or lines. If is possible to insert, delete, or move rectangular pieces of the document, using the computer's screen as one would use scissors and paste to edit a paper document. Advanced features of PIE include the capability to execute pre-defined procedures (or "shells"). PIE offers the capability of being able to create either Binary or Text files as defined by the Apple II operating system and additionally, PIE can also edit INTEGER as well as APPLESOFT BASIC programs. Numerous other products by PROGRAMMA can use text created through the PIE text editor.

Some of the outstanding features of PIE are: Cursor movement up, down, right, left, plus tabs; Character insert and delete; String search forward and backward; Single, conditional, and global replace; Go to line number, plus top or bottom of file; Page scrolling; Line insert or delete anywhere on screen; Split and join lines; Move and copy lines; Right and left shift of text. ASSEMBLY 32K.

PRICE: DISK $79.95

TITLE: WRITE-ON! I
PUBLISHED BY: RAINBOW COMPUTING

It is the system to use for letters, invoices, manuscripts, reports, term papers, legal documents, special forms or any other writing task you have to do. WRITE-ON! is amazingly easy to learn and use, yet you can ... Print your text using upper and lower case characters. Quickly enter text with automatic carriage return. Quickly insert, delete, find, change, and repeat text. All commands are easy to remember. (Change is 'C', Insert is 'I', Top is 'T', etc.). Move, copy, delete and insert large groups of text lines with simple commands. Edit and merge any text disk file — even files not created by WRITE-ON! — and spool text to disk for later printing or editing. Set variable margins (top, bottom, right, and left), and set and clear tabs. Automatically fill out text lines to make an even right margin, center titles and other data, as well as skip and ident for new paragraphs. Enter name and address (or any other information) into form letters (or any other text) from the keyboard at the time of printing. Have up to 20 headings print at the beginning of every page. Print page numbers on each page, when desired, beginning with any selected number. Chain files together when printing so you can print hundreds of pages in one printer run. Use single sheets of paper or continuous forms.

The WRITE-ON! documentation binder contains complete instructions and is large enough to accommodate many floppy disks for text files. Interfaces with all popular printers. APPLESOFT 32K.

PRICE: DISK $99.50.

TITLE: WRITE-ON! II
PUBLISHED BY: RAINBOW COMPUTING

Includes all the features of WRITE-ON!I plus a data file merging system that can output a personalized form letter, check or document for any/all names on a mailing list. Create and maintain mailing lists or other data files, or produce mailing labels. Its preformatted files speed up output on unbuffered or hi-speed printers. WRITE-ON! II has script writing capabilities. APPLESOFT ROM. 48K.

PRICE: DISK $150.00.

WORD PROCESSING SECTION 2

Apple Writer 2WP-1
Apple II Textwriter 2WP-2
Letter Perfect 2WP-2

TITLE: APPLE WRITER
PUBLISHED BY: APPLE COMPUTERS INC.

The Apple Writer program turns your Apple Computer System into a sophisticated text editor — providing you with the capability to write, revise, edit, and print all types of documents quickly and inexpensively. You can easily perform every editing task, from correcting typographical errors to moving whole paragraphs. And you can precisely format and print your text letter-perfect every time.

Apple Writer ... saves time often spent modifying, moving, and formatting text, with its extensive editing and printing commands ... increases productivity by eliminating retyping because corrections can be made character-by-character, so there's no need to retype an entire line when only minor changes are required ... is easy to learn and operate with its simplified command structure ... saves paper costs and filing space with floppy diskette storage ... reduces paperwork costs with its powerful editing capabilities ... allows you to write in any order you choose, so text can be stored in sections and later combined in any order for printing ... protects files from accidental loss through its program/system recovery and audible prompt features.

The Apple Writer program diskette contains a Tutorial text file which you can view on your screen. It introduces you to some of the features of the Apple Writer editor, so that you'll feel more comfortable using the program for the first time. Just follow the simple instructions in the Apple Writer program manual to access the Tutorial.

The Apple Writer program is ready to use when the "Editor Menu" is displayed on your monitor or television screen.

By selecting INITIALIZE NEW FILE, for example, and pressing the "return" key, you may begin a new document. Simply enter your text on the Apple's Keyboard, and it will be displayed simultaneously on your screen. Although only upper case letters will appear, Apple Writer will automatically translate them into lower case during printing. To capitalize a letter or word, use the "ESC" key; capitals will appear as inverse video on your screen and upper case when printed.

With Apple Writer, pressing the "return" key is necessary only at the end of paragraphs. Apple Writer will automatically insert all other "returns" during printing. You can type continuously — and faster — since there's no need to strike the "return" key at the end of every line.

If you want to add a new word or sentence in the middle of a paragraph, move the cursor to the location and begin typing. To remove a word or sentence, simply delete the undesired text by positioning the cursor after the data and backspacing.

Apple Writer also provides a powerful automatic or manual "search and replace" feature. If you've misspelled a word throughout the text, for example, enter the misspelled word and its correct spelling. Then type two simple commands, and Apple Writer will change every misspelling of the word instantly. If you've overused a word and wish to change it only in specific locations, enter the word and an appropriate synonym. Apple Writer will lead you through the text, stopping at each occurrence of the word. You can then specify where you wish each substitution to be made.

To format text, just type one of the four commands that center, left- right-, or fill-justify lines during printing.

With your Apple Computer System connected to a compatible printer, Apple Writer will print your finished documents automatically.

The Apple Writer "Print Menu" will be displayed after you have selected PRINT FILE from your Editor Menu.

To print your document, select PRINT NEW DOCUMENT and press the "Return" key. Apple Writer will then display a listing of printer parameters.

Specify desired line spacing, number of lines per page, page numbering, and margins. Then press the "return" key once more. Apple Writer will print your document exactly as you've specified.
With Apple Writer, a first draft can be the final copy — every time.
To use the Apple Writer program, you will need the following system:
Apple II or Apple II Plus, each with 48K of memory;
Apple Disk II with controller;
A video monitor or television;
A compatible printer*;
A printer controller card*.
*Note: The Apple Computer System works with several printers and appropriate controller cards, including those specified below:
Apple Silentype Printer Card: Silentype Interface Card (supplied with printer)
Centronics 779 Card: Centronics Printer Interface Card (Apple Product A2B0007, included if printer is purchased from Apple Computer Co.)
Printronix Card: Parallel Interface Card (Apple Product A2B0002)
Qume Sprint 5, Diablo Hyterm, and NEC Spinwriter 5510R Card: High Speed Serial Interface Card (Apple Product A2B0005) with P8-02 PROM.
With Your Apple Writer order, you will receive: Two (2) Write-Protected Apple Writer Diskettes, Two (2) Non-Write Protected Apple Writer Diskettes, Apple Writer Instruction Manual.

TITLE: APPLE II TEXTWRITER
PUBLISHED BY: SERVICES UNIQUE, INC.

Services Unique, Inc. announced the Disk Alpple II Report Text writer (Dart) software for the Apple II and Apple II Plus computers. Dart processing software was designed to simplify the creation of letters, reports and other output text utilizing disk files created by Edit.
This text composition system allows free form file input without regard to either line or page length. Dart assembles text into physical lines and pages using predefined operator or file parameters. A special feature allows variable data to be key entered at report generation time utilizing standard text or form letter. File chaining allows an unlimited amount of input text. Other options include pagination, line justification, titles-subtitles, page numbering, line centering, margin setting and double spacing.
Dart operates on an Apple II or Apple II Plus with a minimum of 32K memory, one disk unit and a printer. The textwriter supports a variety of printers including lower case as well as a CRT review. Optional lower case display is available with the appropriate adaptor.
A user manual with documentation is provided.
PRICE: $19.95 on diskette, plus $1.25 shipping
$37.89, special package price for Dart and the text editor (Edit-II)

TITLE: LETTER PERFECT
PUBLISHED BY: JLK ENTERPRISES INC.

The Word Processor for Apple II and Apple II Plus. Now available in 40 or 80 column edition!
Letter Perfect is a character orientated word processor designed with the user in mind. Fast action (machine language), menu driven, single load program. 31K of memory free with 48K system. Requires Paymar ICA, one disk drive, and 32K memory. One time configuration for your system, printer type, etc., can be reconfigured at any time. Right-hand justification. Supports proportional spacing, underlining, boldface with NEC or Qume/Diablo. Will use any of the special print characters of your specific printer. Key codes make mnemonic sense for easy use. All text packed during saving for greater disk storage capacity. Full typewritten page of buffer space for easy manuscript editing. Menu driven

printer selection, or use your own special print driver. Works with Apple's new DOS 3.3. Uses M&R Super-R-Term board for 80-column display.
TAKE A LOOK AT JUST SOME OF ITS FEATURES:
FULL CURSOR CONTROL — • Home Cursor • Scroll Page Forward • Scroll Page Backward • Pause Scroll • Scroll Line at a Time • Scrolling Speed Control • Move-Cursor Up • Move Cursor Down
MULTIFUNCTION FORMAT LINE — • Right Justification • Left Margin • Page Width • Line Spacing • Lines Per Page • Form Stop • Set Page Number • Top Margin
DELETE A CHARACTER/LINE, INSERT A CHARACTER/LINE, HEADERS AND FOOTERS, SHIFT LOCK AND RELEASE, GLOBAL/LOCAL SEARCH, GLOBAL/LOCAL REPLACE, AUTOMATIC CENTERING, NON-PRINT COMMENTING, PLUS MUCH, MUCH MORE.
PRICE: $149.95

SECTION 6809

The Mill 6809 Processor Board for the Apple II 6809-1
6809 Software Power Tools 6809-1
OS-9™ Level Two Multiuser Operating System 6809-1
OS-9™ Level One Operating System 6809-1
Basic09™ Program Language System 6809-2
Microsoft 6809 Basic 6809-2
OS-9™ Text Editor 6809-2
OS-9™ Interactive Assembler 6809-2
OS-9™ Interactive Debugger 6809-2
X-ASM 68 6809-3
6809 Compiler Package 6809-3



TITLE: THE MILL, 6809 Processor Board for the Apple II
PUBLISHED BY: STELLATION TWO

THE MILL, 6809 processor board plugs into the peripheral slots on the Apple II and permits concurrent operation of the 6809 and the Apple's own 6502 processor.
The 6809 board provides optimized operation for real-time data acquisition, stack-oriented languages such as Forth and Pascal, and concurrent programming tasks. The 6809 processor will execute the entire 6800 instruction set. Software written for 6800 machines may therefore be run on the Apple when equipped with the new board.
The 6809 processor is to provide faster operation of graphics display and computation of intensive routines than the 6502 due to a more efficient instruction set. The 6809 Board has the ability to directly manipulate 16-bit quantities, making it faster than the 6502.
The two processors use main memory to pass information from one to the other. The 6809 acts as the bus master during 6502 bus access, and typically commands 80% of the available bus time for memory accesses and data transfers. For speed-sensitive applications, the 6502 can halt the 6809 to acquire total control of the bus.
The Mill permits users of Apple II machines to run the flex operating system designed to 6800-based machines as well as Microware's OS-9 multiprogramming operating system.
The Mill is the second add-on processor card to become available for the Apple II.

TITLE: 6809 SOFTWARE POWER TOOLS
PUBLISHED BY: MICROWARE

OS-9™ LEVEL TWO MULTIUSER OPERATING SYSTEM

True multitasking, multiuser OS for timesharing or real-time control applications.
Sophisticated memory management permits use of over one megabyte.
Versatile, easy-to-use input/output supports multiple devices.
UNIX™-like file structure including hierarchical directories, pipes, filters, and byte-addressable random access files.
Provides log-on password protection and user file security.
Can run on small, inexpensive systems with floppy disks and as little as 32K memory.
PRICE: $495.00

OS-9™ LEVEL ONE OPERATING SYSTEM

A multitasking real-time operating system for software development, process control and smaller multi-user applications.
Versatile input/output system can support multiple devices using interrupt-driven, DMA, or program-controlled data transfer. Users can easily add additional I/O devices.
Tape or disk-based versions available.
Disk versions support UNIX™-like hierarchical directory structure and byte-addressable random-access files.
Memory management for single address-space (up to 64K).
PRICE: $150.99, Disk version
$95.00, Tape version

BASIC09™ PROGRAMMING LANGUAGE SYSTEM
Extended BASIC language compiler/interpreter with integrated text editor and debug package. Runs standard BASIC programs *or* minimally-modified PASCAL programs.
Permits multiple named program modules having local variables and identifiers. Modules are reentrant, position independent and ROMable.
Additional control statements for structured programming: IF ... THEN ... ELSE, FOR ... NEXT, REPEAT ... UNTIL, WHILE ... DO, LOOP ... ENDLOOP, EXITIF ... ENDEXIT.
Allows user-defined data types and complex data structures. Five built-in data types: byte, integer, 9 digit floating-point, string and boolean.
Outperforms any other BASIC on any 8-bit MPU.
Available on ROM, disk or cassette tape. Runs under OS-9™ Level One or Level Two.
PRICE: $195.00 Disk or tape

MICROSOFT 6809 BASIC
Standard Microsoft BASIC optimized for the 6809 and OS-9™.
Four data types: integer, string, single precision and double precision floating point.
Program trace and edit capabilities.
Automatic line numbering and renumbering.
Supports random and sequential file I/O. Full PRINT USING for formatted output.
PRICE: $250.00, Disk or tape

OS-9™ TEXT EDITOR
Minimum-Keystroke macro text editor useful for text preparation or interactive word processing.
User-defined macros with parameters permit virtually unlimited command expansion. Macros can be saved, loaded and edited.
Buffer, line and character oriented commands.
Search, change and extend operations.
Permits multiple input/output files.
PRICE: $75.00, Disk or tape
$90.00, ROM set (2716)

OS-9™ INTERACTIVE ASSEMBLER
Compact Motorola compatible assembler for machine language program development.
Operates in "batch" mode *or* interactive line-by-line mode.
Facilities for generation of OS-9™ memory modules and system calls.
Formatted listings include syntax *and* context error checking.
Runs on OS-9™ Level One or Level Two.
PRICE: $75.00, Disk or tape
$90.00, ROM set (2716)

OS-9™INTERACTIVE DEBUGGER
Facilitates testing and debugging of machine-language programs.
Includes common "monitor" functions: Memory examine/change, breakpoints, display/change registers, etc.
Calculator mode evaluates arithmetic expressions in hex, decimal or binary.
Access to system commands.
Available on ROM, disk or cassette tape.
PRICE: $35.00, Disk or tape
$50.00, ROM (2716)

TITLE: X-ASM 68
PUBLISHED BY: AGENT COMPUTER SERVICES

LOW COST 6800 DEVELOPMENT SYSTEM. The high cost of dedicated microprocessor development systems has forced many technical people to look for alternate methods to develop programs. The very versatile APPLE II combined with the X-ASM 68 CROSS ASSEMBLER provides a very cost effective development system.

X-ASM 68 is a 6502 assembly language program running on the Apple II which accepts 6800 source code from a standard Apple DOS sequential source file, assembles it into binary data in the Apple memory, generates the appropriate program listing, and flags errors if any occur.

The resulting listing can be used to correct errors or to fuel the next phase in program development. For those needing to bum EPROMs, the binary data can be saved in a binary disk file for later use. X-ASM 68 will assemble code for the 6800, 6801 and 6802.

PRICE: $95

TITLE: 6809 COMPILER PACKAGE
PUBLISHED BY: OMEGASOFT

Generates romable, re-entrant, position-independent object code. Extension include: hex and string data types, assembly language interfacing, standard string functions, and program chaining. Version 1 does not include records and pointers; these features will be available in the full language Version 2 upgrade later this year. Minimum of 32K byte system required with either the MDOS or FLEX operating system. Write or call for data sheet and ordering information. Compiler package includes compiler, relocating assembler, linking loader, runtime package, interactive symbolic debugger, and manual.

PRICE: $215.00, Compiler package; $50.00, for source of runtime; $23.00 user manual separately.

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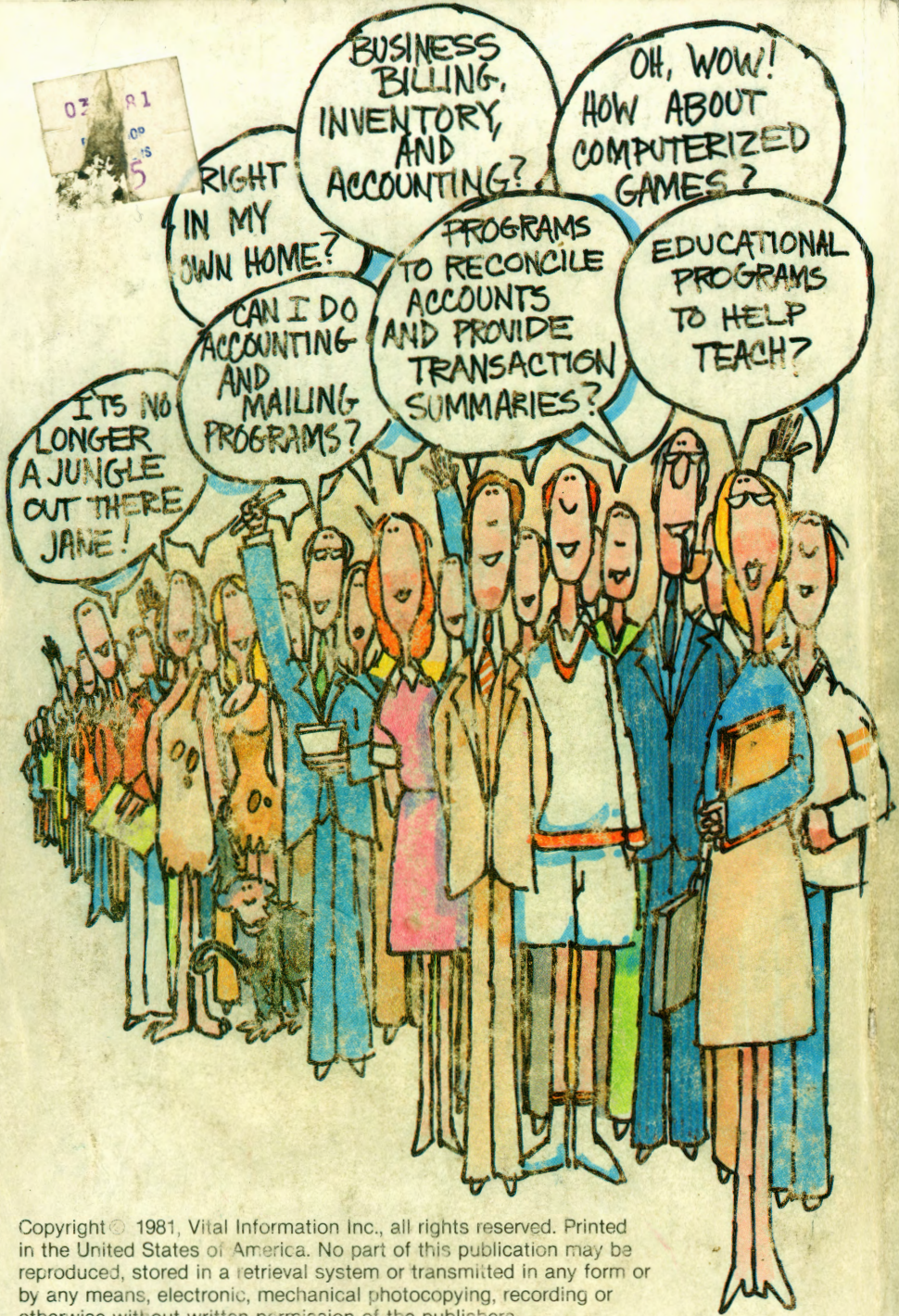
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